

DESKTOP COMPUTERS

PC AT Problems Cause Concern For Owners

BIG BLUE'S HARD DISK FAILURES ARE SHAKING CONFIDENCE IN THE MACHINE

BY PEGGY WATT
Senior Reporter

It's a programmer's cynical cry that only two kinds of computer users exist: those who have lost data and those who will. For owners of IBM's PC AT, that cynicism is serious: Published reports and owner chatter are heavy with stories about sickly disk drives and temperamental controller cards. Coupled with IBM's steadfast denial that anything is wrong, many AT owners are understandably wary about their hardware, even if they haven't lost data.

Despite IBM's denial, the failures are real enough for dealers and users. Both groups have turned to their own resources to solve the problem, coming up with solutions they hope will keep the machines running — machines they say they like and want to use but find frustrating because IBM won't own up to possible defects.

Their solutions range from relying on utility programs that identify and mark bad sectors the operating system sometimes misses to sidestepping the issue by buying the base model PC AT — sans hard disk — and beefing it up with compatible hardware from other manufacturers.

"Every time I meet somebody who finds out I have an AT, his first question is, 'Does your hard disk work?'" says Frank Weinrauch of Salt Lake City. Weinrauch's does, and he keeps it humming with Symphony, juggling his mortgage company work as well as his dealings with the National Association of Realtors. But he isn't taking chances. "I keep it backed up," he says.

Most savvy computer users do. But recent headlines and an informal *InfoWorld* survey show PC AT owners are well-advised to take extra care. The sampling of 48 owners of the Advanced Technology microcomputer, just six months old in February, found failures with nearly half — 47 percent — of the 20-megabyte hard disk drives on the Enhanced PC AT computers the respondents use.

At best, the solution is reformatting —

smattering of comments from users of CompuServe's IBM PC special interest group and several other electronic bulletin boards. Respondents described the state and fate of a total of 164 machines. Of the respondents, 19 users reported problems with the hard disk drives of 78 PC ATs.

Of those who say they have no hard disk problems, two reported sectors going inexplicably and suddenly bad — a suspected sign of hard disk troubles ahead,

according to those who have replaced their hard disk drives in the first few weeks or months of service. The problem apparently causes hard disks to develop chunks of bad sectors — up to 50K worth — that sometimes necessitate reformatting the disk and destroying data. Two other AT users report unreliable 360K floppy disk drives, another area of concern among users and several dealers.

But IBM says such problems don't exist.

"You're beating a dead horse," says IBM spokesperson John Pope about the survey. "I keep reading about problems, but we don't see anything in the warranty claims to indicate there is any problem." IBM

refuses, however, to release figures on warranty claims filed or even the percentage of returns — except to say they are fewer than "usually expected" for an IBM product. Pope says returns are nowhere near 47 percent.

Shortly after the first complaints of AT hard disk problems last November, IBM announced it was "looking into" them but has volunteered little more. Insiders say IBM traditionally considers problems in 3 percent to 4 percent of products shipped permissible. But relying on speculation



IBM's PC AT exposed: While Big Blue's most powerful machine (left) is in short supply, it is the inner works (right) that are being blamed by many for the machine's hard disk troubles.

preferably with any of several utility programs that format "deeper" than the AT operating system's PC-DOS 3.0, an alternative acknowledged even by DOS creator Microsoft Corp. of Bellevue, Washington. (See "PC AT Flaws Due To DOS 3.0?" *InfoWorld*, January 7 & 14, 1985.) In some cases, however, owners had to replace their hard disk drives, and some have run through several new drives while trying to solve the problem.

Although the *InfoWorld* survey was far from comprehensive, it gleaned a healthy

wrought of IBM's closed-mouth policy has led some users — and potential buyers — to suspect the worst. In short, though the disk failures are troubling enough, users are more angered by IBM's insistence that nothing is wrong.

"Hysteria comes from lack of information," says a behavioral psychologist and content AT user who had to replace his hard disk drive controller after only 10 hours of use. "IBM's a big company. It's making a mistake by not coming out and admitting it's made a mistake." Like most other AT users and would-be AT users, he believes IBM will soon solve customers' drive problems. But many users say they wish the micro giant would at least admit to the problems.

"If you get a bad car part, and the manufacturer says so, you might grumble, but you'll take the time to get it replaced. IBM isn't even saying that," says Doug Surette of Businessland in Boston, an AT dealer. He believes Enhanced ATs are being returned because of hard disk troubles at twice the return rate of other IBM products. He adds, however, that the warranty rate isn't a good indication because dealers often solve problems without going through the factory warranty. "Some of those hard disks will be reformatted," he says. "We might not replace anything. But we'll have them in the shop for awhile to redo this, check that. User frustration is high."

One of Surette's biggest AT customers agrees. Stanley Kugell, president of Javelin

disk problems, and one is dead in the shop with a warranty claim pending.

"We generally love the machine," says Christopher Herot, Javelin's vice president of engineering. "We're just disappointed that it doesn't live up to the reliability standards set by IBM." But because of the AT's many attributes, owners are reluctant to take their units to the repair shop. "The machine is not so unusable that we can get along without it," Herot says. "The trip to the shop seems to be one way."

Javelin has circumvented the problem by networking its PC ATs under Ethernet, using a PC XT with 450 megabytes of hard disk storage as the central point. The firm even uses the three ailing ATs, even though bad sectors eventually eat their way across the disks and force reformatting, says engineer Jim Levine. "But the disk cancer comes back," he adds. He suspects a problem with the drive itself causes data to be slowly erased as it is read.

Javelin's technical experts could probably solve their AT problems if they had more information from IBM, Surette says. "It frustrates them because they don't have a path to resolve it," he says. "They ask for technical information to help themselves, but IBM won't even acknowledge there's a problem."

Surette and other AT watchers agree this is typical IBM behavior. "In the past, IBM somewhat acknowledged things," says Surette. "But it never came out and said,

'Hey, we blew it.' Instead of a press conference, it came out with an upgrade." A recent example is IBM's replacement of its originally unworkable PCjr keyboard with a much better one almost a year later — turning complaints to praise for the company.

"My experience with IBM is that it'll go to any length to hide a problem," says Leroy Casterline, whose Enhanced AT runs "nearly 24 hours a day" in his Fort Collins, Colorado, software development work, without any problems. Casterline, a certified IBM

technical representative, says the computer giant will typically tackle and fix a problem internally, then continue as if nothing happened. "IBM just has too much pride," he says. Another user is more succinct: "IBM is full of beans."

The resulting paradox of liking the



Frustrated: Steve Marano, a Nutley, New Jersey, PC AT owner, is on his third hard disk.

machine but often being unable to use it is apparent among owners of ATs, even those whose machines are ailing. While they're disappointed or angry at paying for an IBM product and, as one puts it, "not getting IBM service," they're also reluctant to relinquish their power machines for long. Nearly all the respondents to *InfoWorld's* informal survey praised the speed, capacity, and potential of the PC AT. More than half have added expansion boards, set up RAM disks, and eagerly inserted the recently released IBM Enhanced Graphics Adapter. Several have risked their warranties by cranking up the 80286 microprocessor crystal, tested and set by IBM at 6 MHz, to 8MHz or even 10MHz.

"I'm very pleased with the machine," says Steve Marano, a Nutley, New Jersey, AT owner. "The performance is superb." Marano is on his third hard disk, after his dealer twice replaced apparently faulty ones. "It's just extremely frustrating with the hard [disk] drive problems, and even more so with IBM's response," he says. "IBM sounds very helpful, but when you try to really hunt down anything, it denies there's any problem." He says he plans to get an extended warranty as insurance. But Marano also wonders about IBM's next move. "What if a few months from now IBM comes out with a new, improved model?" Marano asks. "What happens to the original buyers?"

Those original buyers, who have now had as much as six months to scrutinize their units, can deal with the damage in several ways. Microsoft admits its DOS 3.0 doesn't always identify and mark all bad sectors. Users can instead format the hard disk with Defixer from Interactive Data Corp. of



Certified IBM technical representative Leroy Casterline at work in Fort Collins, Colorado: "IBM will go to any length to hide a problem."

Software Corp. of Cambridge, Massachusetts, says IBM doesn't get warranty claims because the problems "come and go." Of the nine ATs his firm has bought since September, only one is reliable, he says. Four have minor hard disk problems but function consistently, three have major hard

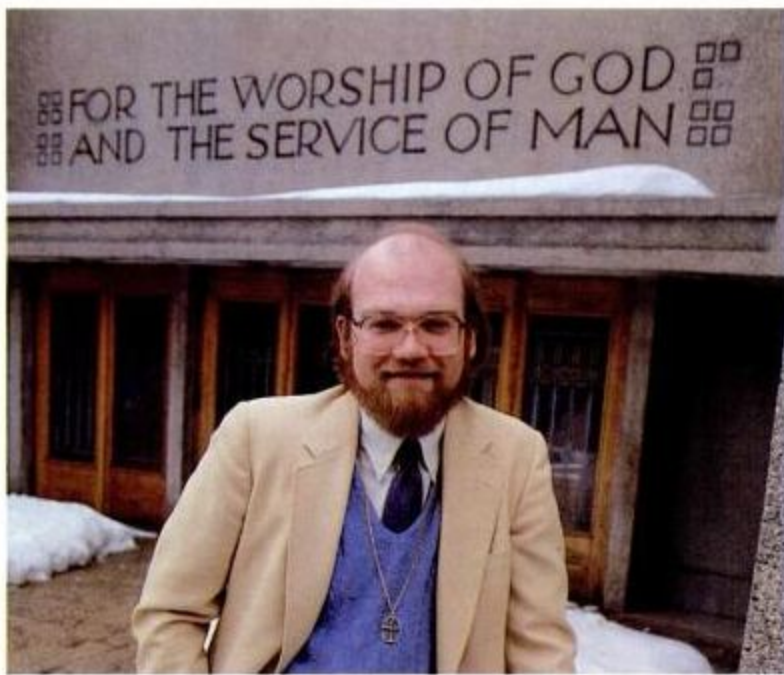
Cambridge, Massachusetts; run the disk through the Norton Utilities Disk Test to better spot unusable sectors; or format with IBM's own Advanced Hardware Diagnostics Disk, which is available for sale but remains in short supply. Most dealers have at least one copy for their use, and many of them format AT hard disks in advance for their customers.

Some knowledgeable users offer their own explanations for the cause of disk damage. One software developer combines theories to blame "a fragile hard disk and an unforgiving DOS." He says his hard disk was jostled during delivery, which caused bad tracks that were not identified or marked by the operating system. He says a mismatch between two connectors may add to the problem, claiming the fixed disk's connector pins are slightly too small for the power supply's corresponding sockets. He guesses that the pins occasionally lose contact with the power supply, which causes incomplete data recording, and recommends using a cable adapter to match the pins.

Several AT users warn their colleagues to take special care when moving the hard-disk-equipped machine. "DOS won't lock out any bad sectors that were damaged in shipment," Casterline says. That problem is reminiscent of the early PC XTs, which sometimes had unexpectedly fragile hard disks, he adds. "Sometimes, reformatting works. Sometimes replacing the controller card works. I think we're seeing more than one problem."

Still, IBM and Computer Memories of Chatsworth, California, the sole supplier of AT hard disk drives, stand by the disk drives. Avi Brand, president of Computer Memories, questions users' complaints. "I have a feeling some people don't know how to use it [the machine]," Brand says. "It's a complicated machine." He offers no opinion of users' theories except to say he can't speak for operating systems or the AT chassis. "We just do the disk drives," he says.

Brand, like IBM, says the only problem with the hard disk drives is their scarcity and the resultant limited number of En-



Religious use: The Rev. Dr. Scot Giles, in front of his Unitarian Universalist Church in Oak Park, Illinois, has had no problems with his PC AT, which is used to keep church records.

hanced PC ATs available. Shipments resumed in January after IBM sold out its 1984 shipments in October. "We're shipping them as fast as we can make them," he says.

Brand says IBM is not returning "significant" numbers of AT hard disk drives, which he defines as 2 percent to 3 percent. The returned drives are repaired and sent back to IBM. Being Big Blue's supplier has proved a mixed blessing: While Computer Memories has hiked its Singapore production to meet the demand for AT drives, the firm anticipates an \$8.8 million third-quarter loss because of reduced prices for the drive and because the firm couldn't make as many hard disks as IBM wanted to buy.

Pope also doubts some complaints, though he says IBM reviews all warranty claims. "A lot of times, there's no problem with the hard disk itself; people just think there is," he says. "We've got the big picture. The numbers are right there." But they remain behind closed doors in Boca Raton, Florida.

Consequently, even AT owners without problems are wary. Part-time software developer and bookstore manager Larry Shields of Lansing, Michigan, says he hopes static electricity is the cause of "a few sectors showing up bad" on the hard disk in the PC AT he bought last September. "It started happening about the time it started getting cold here," he says.

backing up their work diligently, he says.

"You know why they call it a fixed disk?" asks New York City trial attorney Frank Marcus. "Because it's always being fixed." Marcus uses his Enhanced AT for hobbyist endeavors and financial planning. He was one of the 29 PC AT owners to report minor or no problems with their powerhouse personal computers. Marcus cites "a confused CMOS" as his AT's only — and amusing — aberration. "It kept setting itself for 1884 instead of 1984," he says. "It finally healed itself. But it was bizarre for awhile — a computer that thought it was in the 19th century."

The Rev. Dr. Scot Giles reports "no problems whatsoever" with the Enhanced AT he has kept "working constantly" since October in the Unitarian Universalist Church in Oak Park, Illinois. Its 20-megabyte hard disk is nearly filled with 17 megabytes of church business. "I suspect any problems are with the earliest of the ATs," Giles says.

"I'm having no problems, but I'm concerned that it is because the hard disk isn't fully loaded yet," says Dr. Frederic Serota, an Ambler, Pennsylvania, physician who has relied on his AT to handle medical records since October. "I guess I have eight or nine months to see what happens." He says he backs up his hard disk data religiously and is delighted with its performance.

Although IBM is shipping ATs again,

units are still scarce and replacement hard disk drives are even scarcer. Businessland's Surette says he has gotten only two replacement drives in the AT's six months of existence. And IBM repays only the dealer who replaces a defective part with one of IBM's own parts, not one from another manufacturer. Other warranties are rarely as long as the AT's one-year guarantee, he adds. Computer Memories offers only a 90-day warranty on direct sales of the same hard disk drive it sells to IBM for the PC AT.

For some dealers, the situation is an invitation to ingenuity. Edward Dolan, manager of Entre Computer in Westchester, Illinois, says his store plugs in a 35-megabyte hard disk drive and tape backup from Mountain Computer of Scotts Valley, California; adds IBM memory boards; and sells the beefed-up AT for \$8,980 (compared to \$5,795 for IBM's 20-megabyte, no-tape-drive original). Entre supports the IBM chassis for the one-year warranty and the Mountain drive for that manufacturer's six-month warranty. The result is a product so well-received that it "won't stay on the shelves."

While some dealers install Computer Memories drives into basic ATs, Dolan says he hasn't even tried to buy from the AT's original drive maker because many customers appreciate the extra storage and backup capability of tape. But numerous enterprising peripheral makers are capitalizing on rumors and shortages by offering PC-AT-compatible drives. "You can build the PC AT that IBM didn't," says Ben Greene, vice president of marketing for Core International, a Delray Beach, Florida, disk drive manufacturer. He says many Enhanced AT owners are moving the Computer Memories 20-megabyte drive into the second drive slot and installing one of Core's 40-, 56-, or 72-megabyte hard disk drives in the primary slot. Greene also says Core rejected 30 of a shipment of 50 PC ATs because the hard disk drives failed its diagnostics test.

A West Coast computer rental agent advises, "If people want an AT without risk today, buy a basic model and add the extra memory from IBM and a Bernoulli Box," a 20-megabyte cartridge storage system sold by Iomega Corp. of Roy, Utah. PC AT rentals are slow; the agent blames "negative publicity" about hard disk drive troubles.

Some users blame IBM for pushing the AT onto the market too soon, nervous about competition. "If IBM hadn't come out with the AT when it did, it would have started looking really dumb, with the Compaq Deskpro and Tandy 2000," says a Portland, Oregon, owner. "They [the machines] sort of had to come out when they weren't ready." □

COMPETITOR'S PROBLEM: TO CLONE OR NOT TO CLONE

While the PC AT's troubles continue, the surviving developers of IBM PC clones struggle to sort out whether there is a market for true AT-compatible, or clone, computers. The general response is mixed, but most makers seem reluctant to plunge into competition with IBM.

One company making its move is Kaypro, whose announcement of the model 286i was the opening salvo in the clone wars. (See *InfoWorld*, March 4, 1985.) It is the first PC AT compatible to wear the clone badge.

There is also much work on AT clones at the component or operating system level. Award Software, a Los Gatos, California, maker of PC-compatibility-testing programs, recently announced a PC AT read-only-memory basic input/output system (BIOS) for use by potential AT clone makers. The BIOS is an essential ingredient in making a competitive machine behave internally just like the AT. Creating such a program is not without its pitfalls because simple duplication of IBM's BIOS programming, which would guarantee compatibility, is against copyright laws. "The design is different from IBM's because we don't want to get into a copyright issue," says Rene Vishney, president of Award.

Award's work with compatibility testing naturally led to its work on AT-like systems, but Vishney is certain IBM has yet to play its AT trump card. "We think the firm is going to do its own operating system," he says. "IBM can't keep selling Xenix. If my guess is right, IBM might announce in the fall for that operating system.

Despite the availability of a compatible BIOS and a seemingly solid market for the high-performance AT, however, competing computer manufacturers are cautious about recreating the horde of clones that followed the announcement of the IBM PC. With IBM's aggressive pricing on the PC AT, many compatible makers are shying away from calling their products clones or even compatibles, in some cases. Rather, they prefer to talk about issues such as performance or the value-added features of their own machines.

One slim ray of hope for Kaypro and other clone makers is IBM's method of installing random-access memory (RAM) in the AT. IBM is still using a system of

"piggybacking" 64K RAM chips on the AT main circuit board, which could prove more costly than using 256K RAM chips.

Some industry insiders expect different classes of machines that somehow wear the AT-like label. Jim Harris, vice president of the original equipment manufacturers' group at Microsoft, deals directly with manufacturers of PC compatibles, using MS-DOS for new products. He says the AT-compatible machines have two categories. The first provides some kind of unique distribution or appeals to the loyal user bases in such companies as Hewlett-Packard, Digital Equipment Corp., and Burroughs. The purpose of the second group, which Harris says is "substantially riskier," is to "build a better mousetrap," to alter some characteristic of the machine to enhance its performance.

Other industry observers say that could involve approaches such as that taken by Molecular Computer of San Jose, California, which has an AT-like computer with processing split between an Intel 80186 and a 80286 chip. "We're attempting to meet the standards that the AT is bringing to the marketplace," says Molecular's Barry Dearborn.

Despite the current shortages of the AT, the compatible community may have learned its lesson about presuming to permanently steal market share while IBM plays catch-up. "I hope that none of the compatible builders makes the mistake of believing that it has an easy time of it because of shortages, because that's only a temporary phenomenon, and the history should be quite clear to it," Harris says.

"It's going to be much more competitive than it was two or three years ago, and I think it's going to be very difficult for many of these companies, particularly the smaller ones, to do that at a profit," says Robert S. Harp, chairman and CEO of Corona Data Systems of Thousand Oaks, California, an early PC clone maker.

One of the next clone makers to come to market will be a rarity, a new player in the U.S. PC-compatible market. Tomcat Computer of Los Angeles claims to be the No. 1 maker of PC clones in Japan, no great feat considering the smallness of the PC market there. Tomcat is in final preproduction of its AT competitor, according to president Ken K. Inouye.

— Scott Mace