

Beyond Blocks and Bricks

Number Nineteen

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Make that computer last

A laptop that I use regularly will be seven years old in January.

Is it a quality computer? Yes.

Am I lucky? You bet.

Do I treat it with care? Absolutely.

Last month I delivered a TV to my son at college. After we hooked it up, we went to dinner and then went grocery shopping. Somehow, both went on my credit card and not his. During the hours that we were together, my son spoke of a problem that his fraternity house was having with its wireless LAN. In particular, his buddy's laptop was very slow to download files.

I knew why the laptop was slow when we walked by his friend's room and I saw his laptop running while on the friend's bed.

Placing a laptop on a soft surface—including your lap—usually blocks the ventilation holes on the underside of the laptop. When the ventilation holes are blocked, the laptop cannot cool itself, internal temperatures rise, and the processor slows down to protect itself. On a bad day, the processor will shut down until it cools. On a really bad day, the laptop can die.

When I use my laptop, it is on a flat surface. When in my lap, I put it on a large, thin book or, when traveling, the three-ring binder holding lists of local services that is found in almost any hotel room. Either way, the air can reach the ventilation holes and my laptop stays cool.

Want an old, wise, and happy laptop? There are some techniques in this article:

Make Sure the Problem Is Not in Your Chair

By KATE MURPHY
The New York Times
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If you use your laptop on your lap, or leave it plugged in all the time, you may well be cruising for what some experts call Picnic (Problem in Chair Not in Computer) or ID-10t (idiot) errors — computer problems caused by clueless users. Technical support professionals say these errors are responsible for at least half of all computer repairs.

“You’d be surprised how many people unknowingly damage their computers,” said Derek Meister, a technician for the Geek Squad, Best Buy’s repair and on-line support service. A classic mistake, Mr. Meister said, is using a laptop on your lap. Despite the name, a laptop should be operated on a flat and firm surface so that it rests on the four little nubs usually found on the base. A lap desk or even a large enough book will suffice. The point is to allow air to circulate around the machine.

Letting a laptop rest on your thighs — or worse, sink into a cushy comforter — prevents internal heat from radiating outward and can block air intake vents. This causes overheating, a major cause of component failure in computers. Using a laptop on a less-than-flat surface can also put the hard drive at an awkward angle, which can also cause damage.

Speaking of the hard drive, don’t walk around with your laptop while the hard drive is active, because its actuator arm, which skitters over the surface reading or saving data, could bump into the drive’s fragile and finicky magnetic memory material. Many modern laptops have gyroscopes that shut down the hard drive when they sense movement, but that sometimes doesn’t happen fast enough to prevent harm.

“A lot of people close the lid on their laptop and throw it in their case without making sure the hard drive has shut down completely,” said Chris Kramer, director of technical support for Micro Center, a chain of 23 computer and electronics stores that has its headquarters in Hilliard, Ohio, a suburb of Columbus.

Mr. Kramer recommends manually putting a laptop in “sleep” or “hibernate” mode before closing the lid, instead of assuming that the hard drive will shut down automatically. Then wait a beat, because computers need a second or two to do the internal housekeeping necessary to obey the command.

Even then, it’s a good idea to listen for the hard drive to stop spinning before moving a laptop. Also look at the computer’s lights to look for an indication that the laptop is dormant. Depending on the brand of computer, the lights may be a green, amber or red, or there could be no light. In Apple computers, it’s a white light pulsating in a rhythm reminiscent of the slow, steady breath of peaceful sleep.

Owners of a computer with a solid-state drive, which is standard in the MacBook Air, don’t have to worry about damage from jostling. But they too, want to make sure their laptops are in sleep mode before zipping them up in carrying cases. Otherwise, the drive could remain engaged and eventually overheat the machine.

Another common user error is leaving a laptop plugged in all the time. "A lot of people use their laptops as a desktop," said Kevin Dane, executive director of product quality and reliability for Dell, the computer manufacturer. "Leaving it plugged in all the time diminishes the battery life and degrades its performance." Batteries, like muscles, atrophy if not exercised. Unplugging your laptop once in a while, say two to three times per week, is enough to keep the battery fit. (When on the road, I use a laptop. In the office, I use a desktop. Yes, I have two computers. Flash drives make it easy. rjh)

It's also not a good idea to drain your battery completely and not recharge it for extended periods.

Leaving a battery uncharged for a long time can cause a degradation of its chemicals, said M. Stanley Whittingham, professor of chemistry and materials science at State University of New York at Binghamton. "If you treat batteries nicely by using them and not exposing them to extreme temperatures, they can last forever."

When transitioning from the grid to battery power, computer manufacturers and repair professionals suggest pulling out the power cord by the end piece, not by the line. Tugging the line can stress both the cord's wiring and the pinlike contact points within the computer. And, of course, make sure the laptop is unplugged before dashing off with it to the next room or to a meeting.

"I see damaged power plugs all the time," said Tollie Williams, a computer consultant in Decatur, Ala., who repairs both laptops and desktops. "Users jerk them out tripping over them or stress them by trying to get them to reach a power plug a little too far away or bend them at a hard angle trying to fit computers into tight spaces."

Sometimes, misuse can cause the power cord to no longer fit snugly in the housing. When the connection is compromised, laptops may take a longer time to charge, if they charge at all.

Dust can also cause problems, though that is a bigger concern for stationary desktops, particularly if they are kept in areas with pets, smokers and carpeting. "I took the case off a MacPro recently that my co-worker complained was slowing down and freezing up and found about a half inch of dust inside," Mr. Williams said.

The problem was that the machine was near a paper shredder. "I guess it was really adding to the dust load in a room," said Mr. Williams, who removed the dust with a hose attached to a standard vacuum cleaner. "It worked fine after that."

Experts recommend cleaning out desktop and laptop computers at least once a year (every six months if the machine is in a really dusty environment) by taking them into repair centers for a thorough cleaning or by removing the outer case and using a gentle vacuum, compressed air, tweezers or cotton swabs to remove dust bunnies.

"It should be like cleaning your ears," said Mr. Meister of Geek Squad. "You don't want to jam anything in there."

Never use standard household cleaners on or even near computers. The chemicals — and even the fumes — can seep into crevices and cause corrosion.

Picnic error can happen with software as well. While most people know not to download anything from a suspect source, repair technicians say that people frequently install an antivirus program on new computers when one has been already loaded, usually by the manufacturer.

"So you've got two programs trying to do the same task running in the background," said Mr. Kramer from the Micro Center. "The computer slows down and gets jerky and can even freeze up."

Finally, most experts advise shutting down computers every few days to clear out the cache and short-term memory, set off routine system maintenance chores, and install and update software that might have been downloaded while the computer was in use.

Moreover, restarting a computer often fixes mysterious glitches. "There's a reason it's the first thing they tell you to do when you call technical support," said Mr. Williams, the consultant in Decatur. "It works."