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In Age of Impatience, Cutting PC Start Time

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SAN FRANCISCO — It is the black hole of the digital age — the three minutes it can take for your computer to boot up, when there is nothing to do but wait, and wait, and wait some more before you can log on and begin multitasking at hyper-speed.

Some people stare at their screen and fidget. Others pace or grab a cup of coffee. “Half the time, I go brush my teeth,” said Monica Loos, 40, who is starting a business selling stationery online from her home in San Francisco.

Now the computer industry says it wants to give back some of those precious seconds. In coming months, the world’s major PC makers plan to introduce a new generation of quick-start computers, spotting a marketing opportunity in society’s short attention span.

“It’s ridiculous to ask people to wait a couple of minutes,” said Sergei Krupenin, executive director of marketing of DeviceVM, a company that makes a quick-boot program for PC makers. “People want instant-on.”

[Hewlett-Packard](#), [Dell](#) and Lenovo are rolling out machines that give people access to basic functions like e-mail and a Web browser in 30 seconds or less. Asus, a Taiwanese company that is the world’s largest maker of the circuit boards at the center of every PC, has begun building faster-booting software into its entire product line.

Even [Microsoft](#), whose bloated Windows software is often blamed for sluggish start times, has pledged to do its part in the next version of the operating system, saying on a company blog that “a very good system is one that boots in under 15 seconds.” Today only 35 percent of machines running the latest version of Windows, called Vista, boot in 30 seconds or less, the blog notes. ([Apple](#) Macintoshes tend to boot more quickly than comparable Windows machines but still feel glacially slow to most users.)

There is nothing new about frustration with start-up times, which can be many minutes. But the agitation seems more intense than in the pre-Internet days. Back then, people felt less urgency to log on to their solitary, unconnected machines. Now the destination is the vast world of the Web, and the computer industry says the fast-boot systems cater to an information-addicted society that is agitated by even a moment of downtime.

Yet it is a condition that the technology industry — with smartphones and other always-on gadgets — helped create, said Gary Small, a professor at the Semel Institute for Neuroscience and Human Behavior at the University of California, Los Angeles. “Our brains have become impatient with the boot-up process,” Dr. Small said. “We have been spoiled by the hand-held devices.”

PC makers are not merely out to ease our data anxieties with the new machines. They want to help themselves, too. The industry has grown so competitive, and profit margins so thin, that each company is looking for any advantage it can trumpet. Computer makers say the battle for boot-up bragging rights could resemble the auto industry’s race to shave tenths of a second from the time it takes a car to go from 0 to 60 miles an hour.

Hewlett-Packard research shows that when boot times exceed more than a few minutes, users have an exaggerated sense of the time it takes. Four or five minutes can feel like an eternity.

In June, H.P. introduced a new kind of fast-booting laptop, for \$1,200, and the company says the technology is destined to spread quickly. Right now, H.P.’s goal is to offer PCs that boot in 30 to 45 seconds, said Philip McKinney, chief technology officer for the company’s personal systems group. “In 18 months, you’ve got to be 20 to 30 seconds.”

Until Microsoft comes up with a way to greatly shorten the time it takes to load Windows, PC makers are speeding up boot times using programs that bypass Windows. The systems vary technically, but they all rely on a version of an operating system called Linux that gives users quick access to Web browsing and other basic functions of their computer. In some cases, Windows never boots, while in others, Windows starts in the background.

DeviceVM, the maker of a fast-boot program called Splashtop, says it charges PC makers \$1 to \$2 a machine for its software. The company hopes to make more revenue over the long term by charging other software providers that want to include their applications in the menu of programs accessible without a full boot.

Of course, some computer users try to avoid slow boot times by never turning off their machines; they simply leave them in standby mode. But PCs sometimes have a hard time waking up from standby and tend to crash the longer they run without rebooting. Leaving a machine on also wastes electricity and, for laptops, can drain the battery.

Victor Dailey, 54, a computer engineer from San Diego who works at [NASA](#), has an alternative prescription for boot-up anxiety: “I’ll do the cigarettes and a cup of coffee while I wait.”

But he would much rather skip the caffeine and nicotine and get his fix from his computer. “If you could just open it up immediately, just like you do with your cellphone, and text somebody or whatever and close it back up, that would be ideal,” he said.

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