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## The Race to Instant-On Computers Begins

By ASHLEE VANCE

The most fundamental change to the way people interact with PCs since the advent of the Internet may be occurring. The traditional PC is giving way to a new type of machine which has functions somewhere between a smartphone and an Internet appliance. Now it's up to Microsoft to respond to the altered landscape or perhaps turn into a less relevant software maker.

In a [story](#) published Sunday, Matt Richtel and I covered one of the big drivers behind this change in computing behavior – near instant-on machines. These products provide access to basic functions such as the Internet, messaging and Web telephone products in about 20 seconds. The quick boot feature can prove a relief for people tired of waiting anywhere between 90 seconds and four minutes for their computers to start.

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Our story spent a lot of time examining the societal trends that seem to have made, say, 70 seconds so important or so aggravating. People have grown used to smartphones, which give them e-mail in a flash. Often they don't really need Windows software to communicate, surf the Internet or even do work. They want the Web, and they want it now.

These cultural drivers have given rise to some interesting technology shifts as well.

For years, people talked about adding PC-like functions to smartphones. The quest was to give people access to as much bulky business software as possible on their mobile devices. With the instant-on software, we're seeing this push operate in reverse.

People accustomed to checking their e-mail at will on phones now expect the same functions from their PCs. A beefier computer should be able to match its under-powered miniature, right?

In addition, the instant-on machines represent a new opportunity for the open-source Linux operating system, which can compete with Windows.

I say can because the Linux crowd has spent years and years trying to disrupt the dominance of Windows on consumer and business computers with modest – and that's generous – success.

But rather than the oft-discussed head-to-head battle between Linux and Windows, we're seeing Linux latch onto Windows almost like a parasite in a symbiotic relationship with its host.

All of the shipping or soon-to-ship instant-on systems use a thinned-down version of Linux as a base for presenting the quick Internet applications. This makes sense because computer makers can customize Linux to boot fast and use the software for free, meaning they don't add much extra cost to each computer.

In some cases, people will have to pick between starting the Linux-based system or starting Windows. In others, which I'll cover down below, you can start the Linux system, let Windows boot in the background and then toggle back and forth between the systems.

The Linux embrace must rub Microsoft, based in Redmond, Wash., the wrong way.

This isn't Microsoft losing Windows or Office sales. It's Microsoft potentially losing the user experience.

People may start out going a day without using a traditional desktop application. Then they might realize that most of what they're doing is on the Web. They may even go so far as to hunt down online versions of those couple of applications such as a word processor and spreadsheet package that used to require a full operating system. Next thing you know people are touching Windows less and less and wondering if they need it they next time they buy a PC.

Of course, all of these requires a huge dose of skepticism.

“There's not blood in the streets of Redmond in the short-term,” said Mark Shuttleworth, chief executive of Canonical, which makes the Ubuntu version of Linux. “People are still in their minds making sure they buy a Windows laptop.”

But we are seeing a new type of route around Windows.

Microsoft has vowed to improve the boot times of Vista through ongoing work with PC makers and to show far more dramatic speed with the upcoming Windows 7 operating system. And the software maker appears set on shipping its own instant-on software. Earlier this month, it distributed an online [survey](#) which asked how people would react to a system that started in about 8 seconds and gave access to the Internet, music and DVDs before the full Windows started.

Over the next few months, the instant-on technology should become mainstream. Here's a look at what's available and what's coming in the instant-on market.

**DeviceVM** – This Silicon Valley start-up has emerged as the leading independent maker of instant-on software. H.P., Lenovo and Asus use modified versions of DeviceVM's Splashtop [software](#). In all cases, they provide quick access to a Web browser, instant messaging software, photos and voice over Internet protocol software.

The large PC makers tend to ship Splashtop on laptops aimed at consumers.

**H.P.** – Today, you can buy HP's Envy [laptop](#) with the Instant On Solution software, which is Splashtop in disguise. In the coming months, H.P. plans to ship it on an undisclosed number of systems.

**Dell** – In an unusual move, Dell has done a lot of customization work with its instant-on tools. The company plans to ship something called

Latitude On with a pair of laptops. This Dell-made software will permit access to e-mail and the other basic functions.

The software will actually run on a separate ARM processor, often found in mobile phones, rather than a standard Intel or Advanced Micro Devices chip.

Lenovo – By early next year, Lenovo will ship a version of Splashtop on some of its consumer laptops.

Phoenix Technologies – This software maker has been working on a downloadable software package called [HyperSpace](#).

It will let you start a Linux-based system early, while Windows boots in the background. People can then switch back and forth between both sets of software as they desire. It should be widely available in January with Phoenix charging a monthly subscription fee to the software.