Computer Shut Down or Leave On

Q. If I'm going to be off my computer only for a couple of hours, is it better to put in in sleep mode, hibernate or just shut it down?

A: This has actually been an issue of hot debate among computer geeks since probably the invention of the screensaver. Prior to that, you just shut your system down to prevent image burn-in. With screensavers and the fact that it's a lot harder to burn an image into an LCD screen, this is no longer as big of an issue. These days, with screensavers being standard and computers sucking far less power than they did then, the debate has cooled somewhat.

First, let's pin down these terms a little.

When a computer goes into **sleep** or standby mode, it shuts off its display screen, video card, CPU and hard drive, so processes like anti-virus scans won't run. It stores the computer's last state (software opened on the desktop, etc.,) to the RAM, and so requires a small amount of electricity (called a "trickle charge") to maintain that. Since RAM is transient memory, once the computer shuts down completely the computer's current state is lost, including any unsaved information. I have had this happen enough times with my old laptop that I never put it to sleep without saving any open documents first. A laptop left on sleep mode for long enough WILL shut itself down eventually, because the trickle charge will deplete the battery over time. *The advantage to sleep mode is that, when you "wake" your computer, it comes back to its current state very quickly -almost instantly, so if you're only going to be away from it a couple hours, this might be your best bet.*

In **hibernation** mode, the computer writes everything from the computer's RAM, including its current state, to the hard drive and then shuts down, so it functionally uses no power while in hibernation. Once the computer is brought out of hibernation, it goes straight to the computer's current state, including all open programs. Although this takes less time than a full shut-down and start-up, it does take longer than simply waking it up from sleep, although it uses no power when hibernating, as opposed to little when asleep. Again, no programs or scans will run while a computer is hibernating.

Power off is, I think, fairly self-explanatory. One of the hyped advantages of Windows 7 is a significantly shorter start-up process, I haven't upgraded yet and can't attest to this.

The main reason for shutting your PC down is, of course, power savings. The amount of money that it takes to run a PC depends on how many watts you're actually using to run your PC (this can be determined by buying a Kill-a-watt or similar device for about $30), and how much you're being charged by your electric company per kilowatt hour. Most estimates that I'm finding put it between ten and twenty dollars per month, running 24 hours per day.

There's also the question of stress on your computer components. Whereas having it on is harder on your components than having it off, the process of shutting down and starting up your PC puts more stress on these components than simply leaving them on.

So what it comes down to is personal preference. For me, I leave my computer on at night when I want to run virus scans and hard drive scans, and during the day when I'm home and just turn off the monitor. If you do leave the computer on overnight, it's a good idea to restart your computer in the morning. This allows your computer to clear any information in the memory cache and in your RAM and allows your computer to run more quickly.

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