

# Why does Windows keep your BIOS clock on local time?

 [devblogs.microsoft.com/oldnewthing/20040902-00](http://devblogs.microsoft.com/oldnewthing/20040902-00)

September 2, 2004



Raymond Chen

Even though Windows NT uses UTC internally, the BIOS clock stays on local time. Why is that?

There are a few reasons. One is a chain of backwards compatibility.

In the early days, people often dual-booted between Windows NT and MS-DOS/Windows 3.1. MS-DOS and Windows 3.1 operate on local time, so Windows NT followed suit so that you wouldn't have to keep changing your clock each time you changed operating systems.

As people upgraded from Windows NT to Windows 2000 to Windows XP, this choice of time zone had to be preserved so that people could dual-boot between their previous operating system and the new operating system.

Another reason for keeping the BIOS clock on local time is to avoid confusing people who set their time via the BIOS itself. If you hit the magic key during the power-on self-test, the BIOS will go into its configuration mode, and one of the things you can configure here is the time. Imagine how confusing it would be if you set the time to 3pm, and then when you started Windows, the clock read 11am.

“Stupid computer. Why did it even ask me to change the time if it's going to screw it up and make me change it a second time?”

And if you explain to them, “No, you see, that time was UTC, not local time,” the response is likely to be “What kind of totally propeller-headed nonsense is that? You're telling me that when the computer asks me what time it is, I have to tell it what time it is in London? (Except during the summer in the northern hemisphere, when I have to tell it what time it is in Reykjavik!?) Why do I have to remember my time zone and manually subtract four hours? Or is it five during the summer? Or maybe I have to add. Why do I even have to think about this? Stupid Microsoft. My watch says three o'clock. I type three o'clock. End of story.”

(What's more, some BIOSes have alarm clocks built in, where you can program them to have the computer turn itself on at a particular time. Do you want to have to convert all those times to UTC each time you want to set a wake-up call?)



Raymond Chen

**Follow**