

WI-FI - BLUETOOTH

Both Wi-Fi and Bluetooth are found in almost every laptop, tablet and smartphone. But they're very different, and generally used for different things. They can be on and active at the same time, doing these different things, or you can use each one separately.

Wi-Fi, which originally meant "wireless fidelity," is primarily about connecting one or many devices to the Internet, or creating a local wireless network that can link multiple devices. It depends on a central base station (or multiple stations) that sends out a network signal strong enough and wide enough to cover, say, an office or home, a coffee shop or even an airport.

By far the most typical Wi-Fi scenario for consumers is the wireless router installed by an Internet provider in a home. It sends out what might be thought of as invisible Internet "rays" around the house that can be tapped into by any laptops, smartphones or tablets within their range to get online.

Bluetooth is much shorter-range, usually around 30 feet in my experience. It rarely involves getting onto the Internet, and doesn't depend on any central device like a router. It is almost always used to connect two devices together in some useful way.

One example is a wireless speaker and smartphone. The phone and speaker talk directly to each other over Bluetooth, which beams the music from the phone to the speaker without the need for any third device or wide network. That's why it doesn't matter whether there's Wi-Fi in the room.

Other common examples of Bluetooth scenarios are wireless headsets for making phone calls, or wireless keyboards and mice for computers and tablets. If you've purchased a brand-new car in the past few years, you likely had the option of getting Bluetooth installed in your vehicle.

Because Bluetooth is a direct device-to-device technology and used for so many different things, it typically requires that you first "pair" the two devices being linked. This usually involves typing a number generated by one into the other. Wi-Fi has no such pairing requirement, though you'll need a password to access a private Wi-Fi network.

Sometimes the two wireless systems can be used in ways that appear more typical of the other. For instance, if your laptop lacks an Internet connection but your smartphone has one, you can "tether" the two together to get the laptop online. And on some phones, a Bluetooth connection is one of several ways to perform that tethering. In this case, Bluetooth plays a rare role in Internet connectivity.

Wi-Fi can also act like Bluetooth, connecting two devices directly over a short range. A version called Wi-Fi Direct does this. It can transfer photos and files between nearby devices, just like Bluetooth.

Here's what you need to know: Bluetooth is a short-range wireless solution for pairing one device with another, whereas Wi-Fi has greater range and works with multiple devices.