
Bluetooth - You're Connected!

Bluetooth - you've probably purchased (or are looking at!) a cell phone that is "Bluetooth" enabled. And, you're thinking how cool it will be to use it with a "wireless" Bluetooth headset - so you won't be ripping the headset off of your head every time the wire gets caught on something. But what is Bluetooth and why is it the technology of choice for communications between phones, keyboards, PCs, PDAs, headsets, modems, printers.....

Bluetooth is a wireless technology that uses the 2.45 gigahertz frequency that was set aside for use by industrial, scientific and medical devices. It was designed from the start to avoid interference - from cell phones, garage door openers, televisions - you name it - and accomplishes that task in two ways:

- *By using low power* - Bluetooth uses a low 1 milliwatt signal that keeps it from interfering with more powerful devices, but, therefore limits its range to 10 meters (o.k. though for communicating between a keyboard and cell phone or headset and cell phone).
- *By using frequency hopping* - Bluetooth uses 79 individual, randomly chosen frequencies, changing from one to another on a regular basis - actually 1,600 times every second.

When two Bluetooth devices come into range - they first decide if they have something to share, and whether one or other needs to be in control of the conversation. Once they "agree", they establish a personal-area network (PAN) or piconet. This all happens "automatically" - at least automatically after you've installed the "correct" drivers and figured out how to use the Bluetooth enabling software on your device(s). The piconet includes a master and up to 7 "slaves", with the master transmitting in even time slots, the slaves in odd time slots. So, it's obvious that your Bluetooth network is "maxed out" at eight devices.

Bluetooth can transmit at up to 721KB in one direction with 57.6KB in the other or use the same speed in both directions - 432.6Kbps each. More than enough speed for your printer, headset or keyboard!

Why use Bluetooth? It's great for those simple, short connections - cell phone to headset, PDA to keyboard, PC to headset. It's easy - even easier than a Wi-Fi connection (in most cases!) to set up. We use a Bluetooth keyboard, and it was a "snap" to set up with our "smart phone". If you're using a smart phone, PDA, Bluetooth-enabled cell phone, or you want to go wireless in your office (not the house!), Bluetooth may be just the technology for you!

To find out more about Bluetooth - go to: <http://www.bluetooth.org>.

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