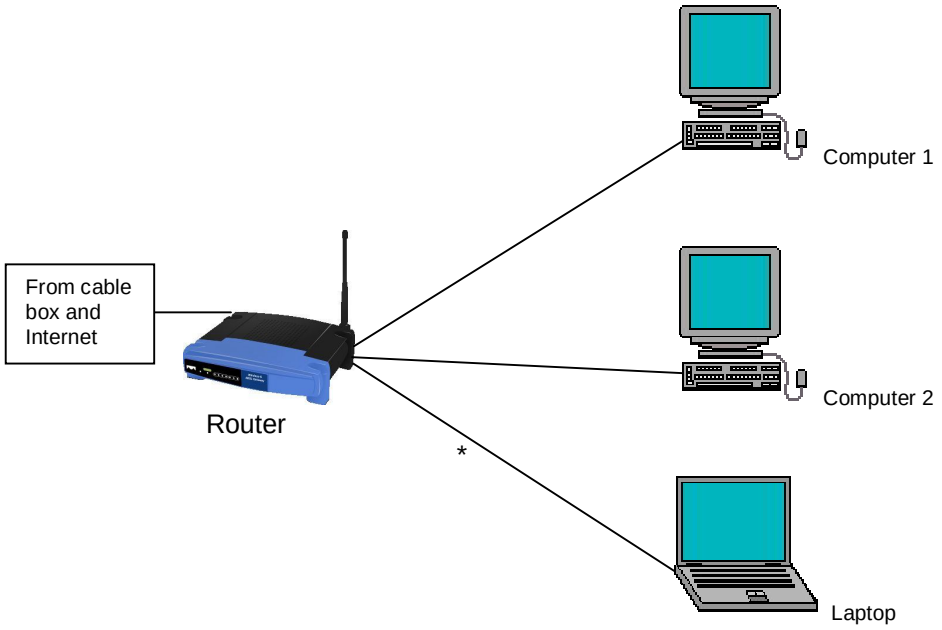
THE COMPUTER CORNER

No. 156. Home Networking

Stan Kaplan, WB9RQR
715 N. Dries Street
Saukville, WI 53080-1664
(262) 268-1949
skaplan@mcw.edu

If you have more than one computer at home, it is useful and worthwhile to network them. Even two: two desktops, a desktop and a laptop, or two laptops. It makes transferring files soooo much easier, and allows you to use one machine to back up the other. Just like an ARES/RACES unit that has access to two repeaters. It cannot be beat!

What will it cost? Prudent shopping at swapfests can cut the cost considerably, down to well under $50 including cables. You need a router – get at least a four-port model, even if you have only two computers. Make it a combination four-port and wireless access router for top flexibility. If one of your machines is a laptop with wireless capability, you can go cable-free with it. Here is a block wiring diagram, assuming three computers including a wireless laptop.



Assuming a wireless router and a laptop with wireless capability, the connection at (*) can be wired, wireless, or even both. For example, my office laptop sits on the desk next to the keyboard and screen of my desktop machine. The laptop is cable-connected to my network, because a cable connection is faster than wireless. However, if I need to use the laptop in the living room or even out on my deck, I simply unplug the cable connection and move the laptop to where it needs to be used. The wireless connection takes over when I unplug the cable, and I miss nary a beat.

So, what do you need? Four cables are shown above – one from the cable box to the router, and one from the router to each computer. Best to use Cat 5e cables for best performance. If you are up to it, you can custom-cut a couple of surplus hanks for your installation and then install the proper connectors on the ends. Pay attention to the proper wiring of the ends. The wires inside the cables are color-coded and insert into the connectors in a very specific order. You will also need a crimping tool (or you can borrow mine).

Now, there are other possible configurations. You can get a wireless card that pops into any desktop computer. Alternatively, you can also purchase a wireless "dongle", which looks just like a thumb drive and it plugs into a USB port. When plugged in and properly installed, it makes a desktop (or a laptop that did not previously have wireless capabilities) into a wireless machine. A good alternative if you don't relish having to pull cables. On the other hand, cabling your network will generally give you the fastest connections.

There are even configurations that don't require a router, but I do not recommend it. The router, be it wireless or cabled, injects a serious level of security into your network. It represents a hardware firewall between you and the Internet. Even with a software firewall (which we all use, correct?), a hardware firewall represents a strong deterrent to bad stuff making its way into your network. We can use all the safety we can get.

So, think about it. There are lots of advantages. I will close with an example. I have six computers in my network, three in our office and three in the basement. Each has its purpose and each is used. In the office, my wife's computer, my main computer and a laptop. In the basement, the Winlink laptop (on 24/7), the unit on my HF station desk, and a machine that always has its covers off – for preparing hard drives for the ARES/RACES machines I rebuild for use all over the state. Each has a C:, D: and E: partition, with everything I create going on the E: partition. If I create a new document, for example this article, at some stage in the article's development I back it up. How? I use a program called GoodSync, which I have written about before. With a few keystrokes, the copy I newly created on my main machine is backed up to all five of the other machines, in a couple of seconds. In this way, all six E: partitions are exact copies of each other. Any one or more machines could crash and I will have lost nothing. That presents me with a great deal of confidence should a catastrophe occur. Oh yes, by the way, one machine is running Windows 2000 Professional, four run Windows XP Professional, and one sports Windows 7 Home Premium. The file system on one is NTFS, and all the rest use FAT32. Computers on a network don't care what file system or what operating system the others are running, when transferring files. Happy computing!