

Broadband and Home Networking: Part 2, Simple sharing

This article looks at how you can start to build your home network, sharing files and printers via a wired networking. The other thing you can share between your home PCs is your connection to the internet, so more than one person can use it at once. This article only looks at wired networking. If you have a Laptop or other PC with wireless (Wi-Fi) networking, you may want to wait for the next article and go straight to wireless networking. But, if you only have a couple of PCs, and they're relatively close to each other, wired networking may be all you need. Don't underestimate wired networking, it may not be as heavily advertised as Wi-Fi, but it is much easier to set up and maintain, and much more secure. You can also add a wireless access point to an existing wired network in the future, so you aren't cutting yourself off from that option.

At its simplest, it allows you to access files stored on one PC, from another. Keep one copy in one place, which makes it easier to keep track of what's where. You can use it to access all your photos stored on one machine, or all your MP3s. But, only having one copy does make you vulnerable to losing the data if your disk dies, so you do need to keep backups. If you've got two PCs, an easy way of coping with this is to keep everything on both PCs, and then they provide a backup to each other. A backup program like Second Copy <http://www.centered.com> to keep the files synchronised between the two machines.

Networking and sharing computer accessories can save you money, if you have more than one PC at home, by linking them together you can just buy one of each device and share them between all the PCs.

If you buy a usb disk to back up your photos to from one PC (as discussed in a previous Propellor Head article). You can share that disk to all your other PCs, and then they can all use it to back up their files and access your photos from all of your PCs.

It allows you to buy the right printer for the right task. Instead of two compromise printers, one on each PC, Buy a laser printer for text and another specifically for printing photos, even though you still install one on each PC, if they're shared you can print to either from more than one PC.

There are a couple of problems with this way of sharing of equipment connected to a PC. The first is that that PC must always be turned on, even if nobody wants to use it, to make that device available. The second is that it uses resource from the PC that's acting as host, so unless it has spare capacity it will slow down for the person using it.

As we'll see in a later article, the next stage is to add free standing devices like disks and printers to the network, which don't need to be connected to a PC of their own. It's also greener as they take a lot less power than a PC, which you're only running as a means of connecting stuff to a network, but that's jumping ahead, let's start with

something a bit simpler. (You can always buy adaptors to move printers and disks from a PC connection to a free standing connection to the network if you decide you want to go that way in the future, so you won't waste money spent now).

So, how do we link together all your home PCs

This is where it can get complicated, what you may need to buy will depend on what your Internet Service Provider (ISP, the company you buy your broadband service from) supplies you with (and what they call it), and what you already have on your PC.

If you only have a usb cable connection between your PC and modem, you aren't going to be able to go any further and network any more machines in, the first thing you need to do is change to Ethernet. But check first whether you already have Ethernet connections on either your PC and/or your modem.

If you don't have an Ethernet connection on your PC, the first task is to install one.

Cards are relatively cheap, but you will have to open your PC up to install one:

Even brand names products will cost you less than £10:

<http://www.broadbandbuyer.co.uk/Shop/ShopDetail.asp?ProductID=232>

<http://www.broadbandbuyer.co.uk/Shop/ShopDetail.asp?ProductID=365>

If you don't want to open up your PC, you can buy a usb Ethernet adaptor:

<http://www.broadbandbuyer.co.uk/Shop/ShopDetail.asp?ProductID=865>

It will be more expensive, but still cost you less than £20.

Now. Let's go and look at the modem connections. If it only has a usb connection, you will have to buy another one, but you can save money by buying a box which combines the functions of the modem with some of the others you'll need.

If you have one Ethernet connection coming out of your modem, you will at the minimum need to buy a hub or switch to give you more connections, you may also need a router. The router is needed because the broadband connection is only expecting one connection, so if you connect a couple of PCs, the router keeps track of which PC is asking to access which web sites, and feeds it through the one connection.

If you have multiple Ethernet connections coming out of your modem, it almost certainly has a switch and a router built in, and so you're good to go from the equipment point of view.

Just connect up all your machines to your router with Ethernet cables and you're ready to set up the sharing. You will need to do some setting up within your PCs, you'll need to put all the PCs in to the same workgroup, and actually share files, folders and printers.

If you do share your connection to the internet, and it's used by a number of people in the evenings, you may find it's not fast enough, so you may have to upgrade to a faster speed service. Log on to your ISP's web site to see what speeds are available and how much they cost. Most providers have a tool on their website which checks your post code to give you an idea of how fast a service your phone line and local exchange will support.