Add a Mac
to the mix

One of the things that holds people back from using an Apple Mac computer is the idea that trading files with Windows is difficult. It's actually simple to do. We show you how

P eople have been known to trade blows over the relative merits of Windows and Apple computers. While each has its own advantages and disadvantages, they are similar in many respects. However, making a connection between the two isn't always as straightforward as linking two computers of the same type. Having said that, it isn't terribly difficult, either.

In this feature, we hope to show that you can have the best of both worlds using a home network. The first thing to do is get the Mac and the PC connected, which can be achieved using an ordinary home network. The next step is to get the Mac to open PC files, and vice versa.

In most cases, Mac and PC programs use the same file formats, so a PC can open a digital photo on a Mac over the network, while the Mac can open and edit a Word file on the PC. Where file formats are incompatible, there is usually a common format that can be used as a go-between.

▲ By using routers with a built-in modem, both PCs and Apple Macs will be able to access broadband internet

Get networking

It is possible to connect two computers directly by cables, and this is the basis of the simplest home networks, but this is limiting, not least because one computer has to be the 'host' and share its internet connection with the other.

As we have seen elsewhere in this guide, networks offer much more flexibility and are no more difficult to set up. The basis for any such network is the **router**. This acts as a communications hub, handling and directing the data traffic between the computers.

Regular routers only enable cable connections between computers, so it's best to get a **wireless** router that enables cable-free networking between computers in different parts of the house. **ADSL** modem routers are better because both PCs and Macs on the network can use the router's connection to surf the internet and send email.

Wireless connections can work well for both PCs and Macs within the house and garden, though it's possible sometimes to get black spots where the communication is weak or unreliable. An innovative technology called power-line networking gets round this. It uses conventional electrical wiring to carry data, providing the reliability of cable transfer without the cables (see page 38 for more info).

New Macs come with **Ethernet** sockets and **Wi-fi** built in, but that may not be the case with a PC. It may be necessary to add a Wi-fi or Ethernet card.

▲ Configure your PC network first by running Windows' Network Setup Wizard

Setting up the PC and Mac

If the PC is already set up for home networking via a router, nothing else needs to be done to prepare it for networking for a Mac. If not, Windows XP's Network Setup Wizard, in the Control Panel folder, helps with configuration.

Note the computer name and the name of the workgroup (MShome is the default in Windows XP; Workgroup is the default in Windows). This will be important later on when you need to identify the network and the computer from another computer.

We won't go into great detail on how to set up a PC for networking here – you can find a complete guide on page 22. The key point is that no special settings or adjustments are required on the PC to enable Mac access – the standard network configuration is fine.

Macs already contain networking hardware, and the Network Setup Assistant is the simplest way to get connected. It works in a similar way to Windows' Network Setup Wizard, presenting a series of simple questions that help it identify the network and connection type. Once connections have been established, they can be examined in the Windows Network Connections Control Panel on the PC and in the Network section of the Mac's System Preferences.
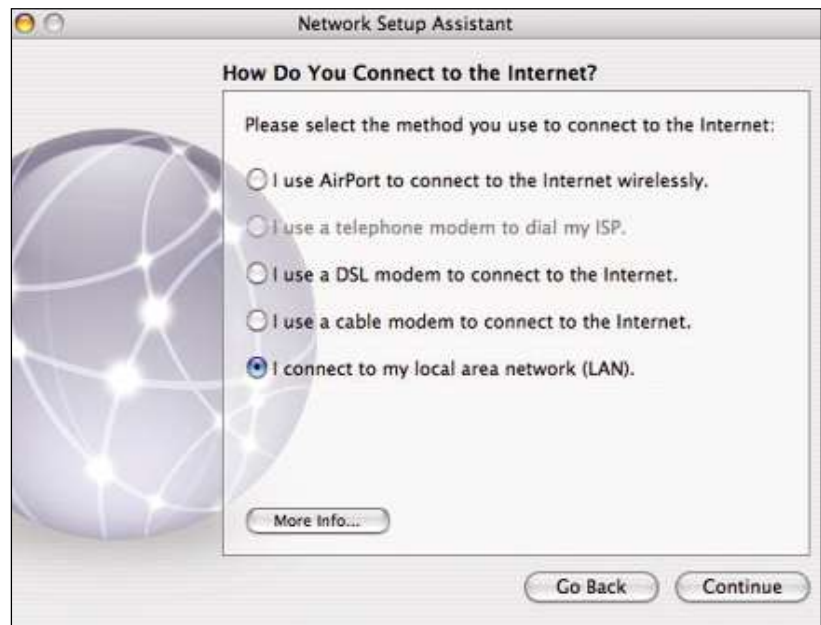
Accessing PC files from a Mac

Once both the Mac and the PC are connected to the network, it is possible for each to access files and folders on the other and carry out file transfers. Before this can happen, though, these items need to be stored in folders set up for sharing. Only files set up for sharing can be seen over the network. It's a way of keeping the majority of your data private and controlling what other users can and cannot access.

Windows XP has a Shared Documents folder by default. It's in the My Documents folder. Similarly, there is a 'Public' folder under 'Documents' in Windows Vista. Drag files and folders to it to share them on a network. The contents of this folder are visible to other users of that computer, and the Shared Documents or Public folder is also visible on the network.

To access this shared folder from a Mac, open a Finder window – you can do this from the keyboard by holding down the Apple key and hitting N when in the Finder – and then click on the Network icon in the sidebar. A list of network locations will appear to the right and, assuming both computers are successfully connected to the network, this list will include MShome (or Workgroup if you are running Vista). Remember, this is the network name chosen by default when the Network Setup Wizard is used on a PC. If another name has been chosen, it will be visible here.

The next step is to click the MShome icon on the Mac. This will show a list of computers connected to the network, which should include the PC's name, chosen during the Network Setup Wizard. Clicking this will display a Connect button. When this is pressed, the Finder will display a list of available folders on the PC. Initially, this will be the Shared Documents (or Public) folder.

When the connection has been made, a SHAREDDOCS icon appears on the Mac's desktop. The Finder's sidebar also displays a SHAREDDOCS icon. This acts as an extra disk drive, and can be opened and navigated in the Mac Finder.

To access other folders on the PC, it's necessary to set these folders up for sharing. To do this, right-click the folder on the PC and choose Properties. The Properties dialogue has a Sharing tab and a checkbox labelled 'Share this folder on the network'. Beneath that is another box, 'Allow network users to change my files', which should be checked. The folder's icon will change to indicate that the folder is available for sharing. On the Mac, it will be one of the connection options available in the Finder.

Note that when a folder is shared, all its subfolders become available, too. While you might not bother password-protecting your PC on a wired home network, it's a good idea with wireless networking, because neighbouring houses could be within range and able to connect to your network. Also, Windows Vista users may need to make further changes to their setup to allow for file sharing (see page 40 for more info).

Accessing Mac files from a PC

Just as Windows has a folder set up specifically for sharing files over a network, Macs have a similar feature. First, it's necessary to adjust the ▶

▲ The Network Setup Assistant in Mac OSX is similar to the Network Setup Wizard in Windows

File sharing with Leopard

If you're using the very latest version of Mac OSX – version 10.5, or Leopard – then file sharing with Windows PCs works in a slightly different way.

From the Apple menu, choose System Preferences, then click Sharing. In the dialogue box that appears, select File Sharing from the list, then click on Options. Select 'Share files and folders using SMB' and, if necessary, select the user account that will be sharing its folders. Click Done.

Windows computers no longer show up under 'Network' in Leopard's Finder window now; they should appear under 'Shared' in Finder's left-hand menu bar.

Apple claims that file sharing is much easier with Leopard, but the truth is that many people who have upgraded from the previous version of OSX have found that new problems have been introduced.

If you use Leopard and you're having trouble getting it to work, have a rummage around Apple's forums at **http://discussions.apple.com** for some answers.
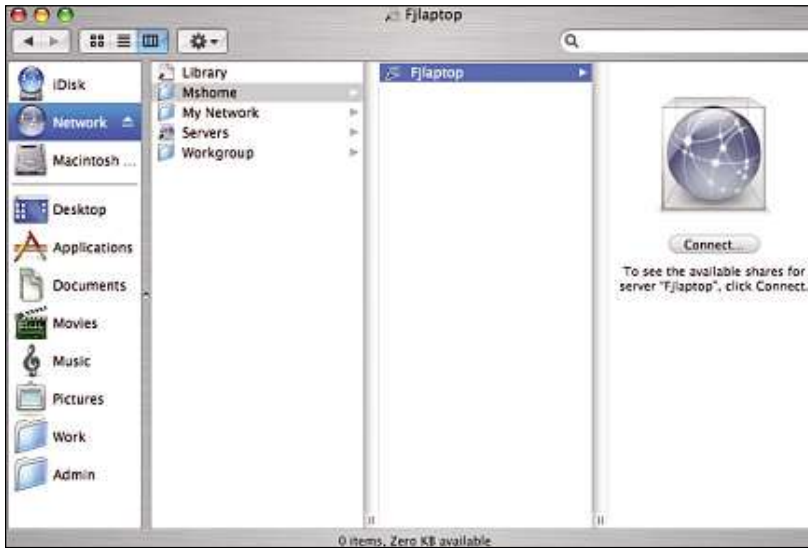
▲ Look for your Windows Workgroup name under 'Network' in your Mac's finder

▲ Windows Sharing needs to be activated in your Mac's Sharing options so files can be accessed from a PC

Sharing settings in Network Preferences. The Services tab has Personal File Sharing and Windows Sharing boxes, which need to be checked. With the Windows Sharing item selected, click the Accounts button below to the right. The PC will only access folders for the user accounts specified here.

On the PC there are two ways to access the shared folders on the Mac. The first is to open My Network Places, then Microsoft Windows Network. There should be two items here: MShome (the workgroup set up by Windows) and Workgroup (the workgroup created by the Mac). Open Workgroup.

The PC will show the contents of the user's home folder, but will only be able to access the contents of the Public folder. Within this is a Drop Box. The only way to transfer a file to the Mac is by placing it in this Drop Box folder. The only way to copy a file from the Mac is if it has been placed in the Public folder.

The Mac controls file sharing more rigorously than the PC, and it is not possible to share just any folder in the same way you can on the PC. There is another way to connect to shared folders on the Mac which is more reliable, especially if the Mac is set up for multiple users, each with a Public folder that needs to be shared.

Go to My Network Places and click 'Add a network place' under Network Tasks. The wizard will request the network address – this can be found on the Mac in the Sharing System Preferences window if the Windows Sharing

item is highlighted. The next step is to enter a name for the network place. This is a chance to choose something more concise and recognisable than the default name. Windows will then open the shared folder to demonstrate that the connection has been successful. This second approach is better when there are multiple user accounts on the Mac because it is possible to set up a Network Place for each user on the Mac. PCs don't recognise Macs and their shared folders as fluently as Macs recognise PCs. For this reason, and because Macs have rigid systems for file sharing, it's easier to use the Mac for file transfers.

Swapping files

Once Macs and PCs are networked, it's possible to swap files and folders between the two PCs. In many cases, the Mac will be able to open files created on the PC, and vice versa.

Certain file types are common to both operating systems. For example, digital photos are commonly stored as JPEGs, TIFFs or RAW

▲ It's possible to share any folder on your PC with your Mac – you just need to change its properties first

File sharing with Vista

It's actually trickier to set up file sharing with a Vista PC. This is partly down to Microsoft's new-found enthusiasm for security, and partly because it's just more fiddly.

You'll need to know your Mac's **IP** address. To locate it go to the Apple icon in the top left-hand corner and select System preferences, then choose Network.
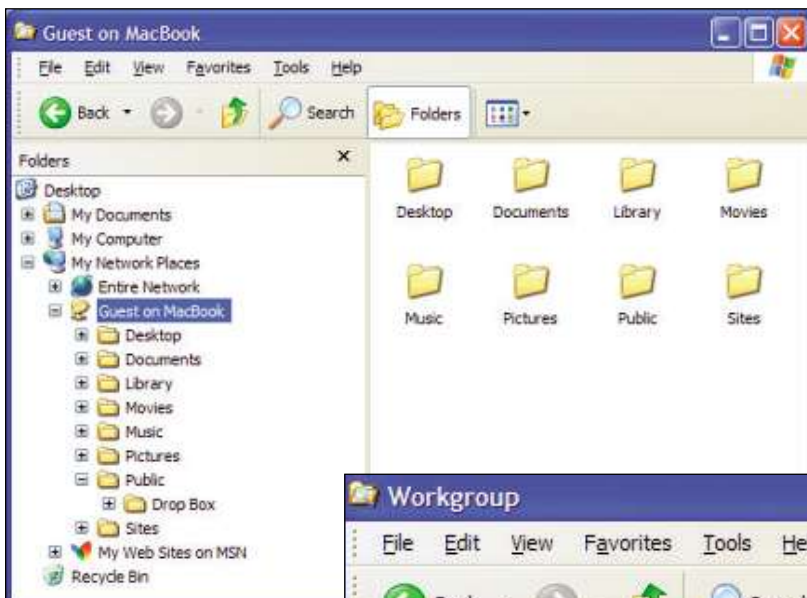
In the second pull-down menu, make

sure you've selected Network Status. Your Mac's IP address should be shown.

Your username when you log in from Vista will be the IP address, then a backslash - \ - and then your username on the Mac. This should look something along the lines of 192.164.2.5\bob.

Make sure File and Printer Sharing is switched on in Vista, and look for your Mac's icon in the Network Explorer window.

▲ It is possible to browse shared Mac folders on your PC

▲ You can add shared Mac folders to your XP PC through My Network Places to make these more accessible

▲ You may find there are two workgroups in your network, one of which is Mac

files. JPEGs and TIFFs are universal. Photoshop PSD files can be opened by Photoshop and Elements, and these programs are available in Mac and PC versions. Increasingly, other image-editing programs can work with PSD files, too.

It's a similar story with word processing documents, spread-sheets and presentations. Here, though, it's a big advantage to have Office 2004 installed on the Mac, because it will then be able to open PC Word, Excel and Powerpoint files from PCs directly. It works in the other direction, too.
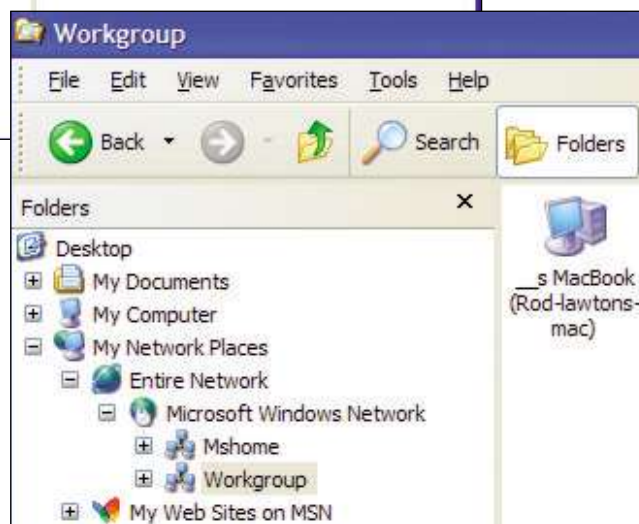
Without Office 2004 on the Mac, things are more complicated. The Mac's Textedit program can open Microsoft Word files from the PC and save them in Word format, too. Keynote on the Mac will open Powerpoint files and can export the format.

Spreadsheets are more problematic, since the Mac doesn't come with a spreadsheet program as standard. Anyone planning to use a Mac alongside PCs for general office work would be well advised to invest in Office 2004, not just to extend the range of tasks the Mac can take on, but to make exchanging Office files simple.

Web and email don't pose any compatibility problems. Macs and PCs use the same HTML files and graphics formats, and both can open and save email attachments sent by the other. Both use the Zip format for compression.

Finding common file formats
Difficulties only arise with more specialised applications, or where a program is Mac or PC-specific. For example, Paint Shop Pro files created on a PC can't be opened on the Mac because there is no Mac version of that program. Similarly, Pages word processor documents created on a Mac can't be opened on a PC. The solution here is to use a common format that both computers and their software can work

with. With digital images, this would be JPEG, TIFF or PSD. Text files can be in TXT, RTF and DOC (Word document) formats. It's often possible to exchange database files such as contacts lists in CSV (comma-separated values) format, which is a specially formatted type of plain text file.

Office 2007 files created on a PC may pose a problem since they use Microsoft's new Open XML format, which older versions can't read. Microsoft has released a file converter for the Mac so that these files can be opened in Office 2004, but the next version of Office for the Mac cannot be far away and will surely add support for this format. In the meantime, Office 2007 users should save documents in an earlier Office format (Office 2003, for example) for Mac users.

Be prepared
Sharing files between a Mac and a PC across a network isn't hard, but it can be tricky if you don't follow all the necessary steps. In general, it's much easier to carry out file transfers from the Mac because it recognises PCs on the network more readily than PCs recognise Macs.

It's also possible to share any folder on a PC, but on a Mac you are restricted to the user's Public folders. In the end, though, working with a Mac on a network is little different from working with a PC. What this demonstrates is just how successfully Macs can now integrate with PCs.
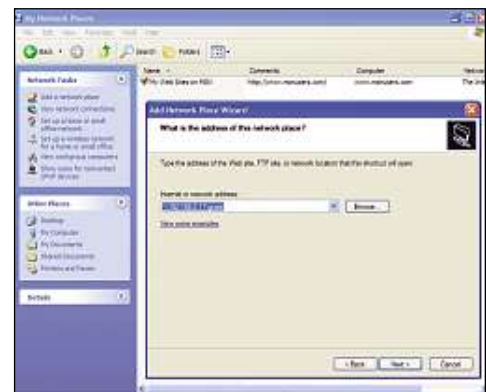
Jargon buster

ADSL Transmits digital data at broadband speed on phone lines.

Ethernet A type of computer network that allows a number of PCs to be linked together.

Icon A small image used by Windows to identify a file or application.

IP address An identifying number of a computer attached to a network.

JPEG A common format for image files. JPEGs are compressed so are ideal for web pages.

Operating system Governs the way the hardware and software components in a computer work together.

RAW A photo exactly as the camera captured it, without compression or optimisation.

Router A device used to connect more than one computer together and/or to the internet as an alternative to a modem.

TIFF A file format used to store graphics images.

Wi-fi An umbrella term for various standards for wireless networking.

Wireless The ability to connect devices, or connecting to the internet, without the use of cables.

For more Jargon Buster definitions see page 97 or visit
www.computeractive.co.uk