

COMPUTING FOR THE BEWILDERED

The File System

Everything stored on a computer disk or tape, be it floppy hard or CD, is in the form of FILES.

Just a confirmation. Folders and Directories are exactly the same thing. Folders is the newer name, directories the older.

Each file will have a filename and (usually) an extension. Originally, file names were limited to an 8 character name and a 3 character extension. This all changed with Windows95, but I'll stick to shorter names for demonstration. The name and extension are separated by a full stop.

Examples of filenames are:

CONFIG.SYS
COMMAND.COM
CHESS.EXE
MYWORK.TXT
READ.ME

Certain extensions are reserved to mean certain things:

SYS - a SYStem file or device driver
COM - a COMmandable file
EXE - an EXEcutable file
BAT - a BATch file.
DLL - a Dynamic Link Library file

SYS files are part of the "works", and generally need not concern us.

DLL files are the mechanism by which Windows applications share data and talk to each other.

COM EXE and BAT files are the files which can be run from the "run" command or a command line. For the average user, there is no difference between COM and EXE programs. However, BAT files are text files of lists of instructions that are well within the capabilities of average users to create. BAT files were poorly catered for under Windows 95 and Windows 98. However, the most recent versions of Windows has reintroduced the concept, as a script file.

Other extensions are conventionally used for specific purposes. Some of the more common are:

DOC - a document file created by a word processing package
TXT - an ASCII text file
INI - a program initiation file.
SCR - a SCReen Saves
JPG - a JPeG picture file.
EML - an EMaiL file
HTM (or HTML) - A HyperText Markup Language file, as used on the World Wide Web.

DRIVES

The different drives on your computer are labelled by letters of the alphabet followed by a colon, viz.:

A: B: etc.

All PCs have an A: This is the floppy drive from which the computer can be booted. A system disk in A: can always be used to boot from even if there is a bootable hard disk.

A second floppy if fitted will be B:. If there is no second floppy, the first can also be accessed as B:.

Windows has the ability to divide hard disks into partitions, each with its own drive letter. You may therefore have one hard disk which is divided into two or more drives (these are called logical drives), or you can have two or more hard disks, any of which may contain logical drives.

Whatever the arrangement, the first partition on the first hard disk is C:, and is normally bootable, so the computer will boot without the need to insert a system disk. Large systems have many drives; the author's system currently goes to J:.

Other devices, notably CD-ROM drives, also have a drive letter. These letters are allocated on boot after all the hard disk partitions have been accounted for. For most purposes, CD-ROMs can be regarded as very large read-only floppy disks!

In order to make organising disks more easy, drives can be divided into subdirectories. Hard disks are always so divided, floppy disks less often.

The root, or main directory, (sometimes called top level directory) is the one that always exists, and from which other directories, often called subdirectories, branch.

The rules for directory names are exactly the same as those for files, although extensions are not normally used.

The layout of directories and files on a disk is called a **TREE**. Here is a simple example:

```
C:
| -COMMAND.COM           File in root directory
| -AUTOEXEC.BAT         "
| -CONFIG.SYS           "
| -DOS                  Directory
| | -CHKDSK.EXE         File in DOS subdirectory
| | -KEYB.COM           "
| | -etc. etc.
| -WORKS                Directory
| | -WORKS.EXE          File in WORKS subdirectory
| | -WORDS              Subdirectory of WORKS
| | | -LETTER1.DOC      File in WORKS\WORDS subdirectory
| | | -LETTER2.DOC      "
| | -SPREAD             Subdirectory of WORKS
| | | -SHEET1.WS        File in WORKS\SPREAD subdirectory
| | | -SHEET2.WS        "
```

Note the use of the \ (backslash) above. To give the full location (PATH) of a file, we use the form:

```
C:\WORKS\SPREAD\SHEET2.WS
```

This means "the file SHEET2.WS, found in the SPREAD subdirectory of the WORKS subdirectory on C:"

When housekeeping in DOS or Windows, it is not always necessary to quote the full path, but it is NEVER, EVER WRONG to do so, and may prevent errors.

Although most file management operations are nowadays performed from the Windows desktop, command line operation is not only still a part of your tools, but has been brought back to prominence in Windows XP with the command interpreter CMD.EXE. It is not necessary to learn the command line in order to keep your disks in order, but it is often very much quicker. However, this is for later!