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COMPUTER DICTIONARY

SECOND EDITION



THE COMPREHENSIVE
STANDARD FOR
BUSINESS, SCHOOL,
LIBRARY, AND HOME



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HPFS and NTFS support spaces in filenames. *See also* directory, path.

filename extension *See* extension.

file protection A process or device by which the existence and integrity of a file are maintained. Methods of file protection range from allowing read-only access and assigning passwords to covering the write-protect notch on a disk and locking away floppy disks holding sensitive files.

file recovery The process of reconstructing lost or unreadable files on disk. Files are lost when they are inadvertently deleted, when on-disk information about their storage is damaged, or when the disk is damaged. File recovery involves the use of specialized utility programs, which attempt to rebuild on-disk information about the storage locations of information belonging to deleted files. Because deletion makes the file's disk space available but does not remove the data, data that has not yet been overwritten can be recovered. In the case of damaged files or disks, recovery programs read whatever raw data they can find and save the data to a new disk or file in ASCII or numeric (binary or hexadecimal) form. Files salvaged in this way might require editing to become usable. In some instances, however, such reconstructed files contain so much extraneous or mixed information that they are unreadable. The best way to recover a file is to restore it from a backup copy.

file server A file-storage device on a local area network that is accessible to all users on the network. Unlike a disk server, which appears to the user as a remote disk drive, a file server is a sophisticated device that not only stores files but manages them and maintains order as network users request files and make changes to them. To deal with the tasks of handling multiple—sometimes simultaneous—requests for files, a file server contains a processor and controlling software as well as a disk drive for storage. On local area networks, a file server is often a computer with a large hard disk that is dedicated only to the task of managing shared files. *Compare* disk server.

file sharing The use of computer files on net-

works, where files are stored on a central computer or a shared server and are requested, reviewed, and modified by more than one individual. When a file is used with different programs or different computers, file sharing can require conversion to a mutually acceptable format. When a single file is shared by many people, access can be regulated through such means as password protection, security clearances, or file locking to prohibit changes to a file by more than one person at a time.

file size The length of a file, typically given in bytes. A computer file stored on disk actually has two "file sizes," logical size and physical size. The logical file size corresponds to the file's true size—the number of bytes it contains. The physical size refers to the amount of storage space allotted to the file on disk. Because space is set aside for a file in blocks of bytes, the last characters in the file might not completely fill the block (allocation unit) reserved for them. When this happens, the physical size (total number of bytes in all allocation units) is larger than the logical size of the file. This distinction helps explain why an application and the operating system sometimes report different sizes for the same file.

filespec *See* file specification.

file specification Often abbreviated filespec. The path to a file, from a disk drive through a chain of directory files to the filename that serves to locate a particular file. A file specification can also be a filename containing wildcard characters that indicate which files among a group of similarly named files are requested. In some situations, a file specification is also a document that describes the organization of data within a file.

file structure A description of a file or group of files that are to be treated together for some purpose. Such a description includes file layout and location for each file under consideration.

file system In an operating system, the overall structure in which files are named, stored, and organized. A file system consists of files, directories, and the information needed to locate and access these items. The term can also refer to the portion of an operating system that translates



requests for file operations from an application program into low-level, sector-oriented tasks that can be understood by the drivers that control the disk drives. *See also* driver.

file transfer The process of moving or transmitting a file from one location to another, as between two programs or from one computer to another.

file type A designation of the operational or structural characteristics of a file. A file's type is often identified in the file's name; with MS-DOS, a file's type is usually reflected in the filename's extension. *See also* file format.

fill In computer graphics, to "paint" the inside of an enclosed figure, such as a circle, with color or a pattern. The portion of the shape that can be colored or patterned is the *fill area*. Drawing programs commonly offer tools for creating filled or nonfilled shapes; the user can specify color or pattern.

film recorder A device for capturing on 35-mm film the images displayed on a computer screen.

film ribbon *See* carbon ribbon.

filter In computing, a program that reads its standard or designated input, transforms the input in some desired way, and then writes the output to its standard or designated output destination. A database filter, for example, might eliminate information that did not match a predefined set of specifications. Similarly, in the MS-DOS and OS/2 operating systems, the filter commands FIND, SORT, and MORE operate selectively on input before passing it along: FIND passes on only those items requested by the user; SORT arranges the input alphabetically and numerically; and MORE passes characters to the screen, stopping and waiting for a signal when the screen is full.

In communications and electronics, hardware or software that selectively passes certain elements of a signal and eliminates or minimizes others. A filter on a communications network, for example, must be designed to transmit a certain frequency but attenuate (dampen) those above it (a low-pass filter), those below it (a high-pass filter), or those both above and below it (a band-pass filter).

Final-Form-Text DCA Abbreviated FFTDCA. A standard in Document Content Architecture (DCA) for storing documents in ready-to-print form for interchange between dissimilar programs. A related standard is Revisable-Form-Text DCA (RFTDCA). *See also* DCA.

find *See* search.

Finder The standard interface to the Macintosh operating system, which allows the user to view the contents of directories (file folders); to move, copy, and delete files; and to launch applications. Items in the system are often represented as icons, and a mouse or similar pointing device is used to manipulate these items. The Finder was the first commercially successful graphical user interface, and it helped launch a wave of interest in icon-based systems. *See also* MultiFinder.

fingerprint reader A scanner that reads human fingerprints for comparison to a database of stored fingerprint images. Fingerprint readers are used to protect computer data files.

firmware Software routines stored in read-only memory (ROM). Unlike random access memory (RAM), read-only memory stays intact even in the absence of electrical power. Startup routines and low-level input/output instructions are stored in firmware. It falls between software and hardware in ease of modification. *See also* RAM, ROM.

first-generation computer *See* computer.

first in, first out Abbreviated FIFO (pronounced "fie-foe"). A method of processing a queue in which items are removed in the same order in which they were added—the first in is the first out. Such an order is typical of a list of documents waiting to be printed. *Compare* last in, first out.

first normal form (1NF) *See* normal form.

fitting The calculation of a curve or other line that most closely approximates a set of data points or measurements. *See also* regression analysis.

fixed disk *See* hard disk.

fixed-length field In a record or in data storage, a field whose size in bytes is predetermined and constant. A fixed-length field always takes up the same amount of space on a disk, even when the data stored in the field is short. *Compare* variable-length field.