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IPR2014-00717 BHM Ex. 2014

PUBLISHED BY
Microsoft Press
A Division of Microsoft Corporation
One Microsoft Way
Redmond, Washington 98052-6399

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Library of Congress Cataloging-in-Publication Data
Microsoft Computer Dictionary. -- 4th ed.

p. cm.

Previous eds. published under title: Microsoft Press computer dictionary

ISBN 0-7356-0615-3

1. Computers Dictionaries. 2. Microcomputers Dictionaries.

I. Microsoft Press computer dictionary.

QA76.15.M538 1999

004'.03--dc21

99-20168

CIP

Printed and bound in the United States of America.

1 2 3 4 5 6 7 8 9 MLML 4 3 2 1 0 9

Distributed in Canada by ITP Nelson, a division of Thomson Canada Limited.

A CIP catalogue record for this book is available from the British Library.

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A

Advanced Digital Network *n.* A dedicated line service capable of transmitting data, video, and other digital signals with exceptional reliability, offered as a premier service by communications companies. Usually Advanced Digital Network refers to speeds at or above 56 kilobits per second (Kbps). *See also* dedicated line.

Advanced Interactive Executive *n.* *See* AIX.

Advanced Mobile Phone Service *n.* *See* AMPS.

Advanced Power Management *n.* An application programming interface developed by Microsoft and Intel to monitor and conserve power on a PC-based system, particularly a battery-powered laptop computer, by enabling programs to communicate their power requirements so that the system can route power away from unused hardware components. *Acronym:* APM. *See also* application programming interface.

Advanced Program-to-Program Communication *n.* *See* APPC.

Advanced Research Projects Agency Network *n.* *See* ARPANET.

Advanced RISC *n.* Short for **Advanced Reduced Instruction Set Computing**. A specification for a RISC microchip architecture and system environment designed by MIPS Computer Systems to provide binary compatibility among software applications. *See also* RISC.

Advanced RISC Computing Specification *n.* The minimum hardware requirements enabling a RISC-based system to comply with the Advanced Computing Environment standard. *See also* Advanced RISC.

Advanced SCSI Programming Interface *n.* An interface specification developed by Adaptec, Inc., for sending commands to SCSI host adapters. The interface provides an abstraction layer that insulates the programmer from considerations of the particular host adapter used. *Acronym:* ASPI. *See also* adapter, SCSI.

Advanced Streaming Format *n.* An open file format specification for streaming multimedia files containing text, graphics, sound, video, and animation. ASF does not define the format for any media streams within the file. Rather, it defines a standardized, extensible file "container" that is not dependent on a particular operating system or communication protocol, or on a particular method (such as HTML or

MPEG-4) used to compose the data stream in the file. An ASF file consists of three objects: a Header object containing information about the file itself; a Data object containing the media streams; and an optional Index object that can help support random access to data within the file. The ASF specification has been submitted to the ISO (International Standards Organization) for consideration. *Acronym:* ASF. *See also* streaming.

adventure game *n.* A role-playing computer game in which the player becomes a character in a narrative. In order to complete the game, the player must solve problems and avoid or overcome attacks and other forms of interference from the game's environment and other characters. The first adventure game was called "Adventure." It was developed in 1976 by Will Crowther of Bolt, Baranek & Newman. *See also* role-playing game.

AE *n.* Acronym for application entity. In the ISO/OSI reference model, one of the two software parties involved in a communications session. *See also* ISO/OSI reference model.

AFC *n.* *See* Application Foundation Classes.

AFDW *n.* *See* Active Framework for Data Warehousing.

AFIPS \ə'fips\ *n.* Acronym for American Federation of Information Processing Societies. An organization formed in 1961 for the advancement of computing and information-related concerns. The U.S. representative of the International Federation of Information Processing, AFIPS was replaced by the Federation of Computing in the United States (FOCUS) in 1990.

AFK *adv.* Acronym for away from keyboard. A phrase occasionally seen in live chat services on the Internet and online information services as an indication that one is momentarily unable to answer. *See also* chat¹ (definition 1).

AFS *n.* Acronym for Andrew File System. A distributed file system for facilitating accessibility to remote files in large networks. Owned and maintained by Transarc Corporation, AFS was originally developed as part of the Andrew project at the Information Technology Center at Carnegie-Mellon University.

agent *n.* **1.** A program that performs a background task for a user and reports to the user when the task is done or some expected event has taken place. **2.** A program that searches through archives or other re-

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positories of information on a topic specified by the user. Agents of this sort are used most often on the Internet and are generally dedicated to searching a single type of information repository, such as postings on Usenet groups. Spiders are a type of agent used on the Internet. *Also called* intelligent agent. *See also* spider. **3.** In client/server applications, a process that mediates between the client and the server. **4.** In Simple Network Management Protocol (SNMP), a program that monitors network traffic. *See also* SNMP.

AGP *n.* Acronym for Accelerated Graphics Port. A high-performance bus specification designed for fast, high-quality display of 3-D and video images. Developed by Intel Corporation, AGP uses a dedicated point-to-point connection between the graphics controller and main system memory. This connection enables AGP-capable display adapters and compatible chip sets to transfer video data directly between system memory and adapter memory, to display images more quickly and smoothly than they can be displayed when the information must be transferred over the system's primary (PCI) bus. AGP also allows for storing complex image elements such as texture maps in system memory and thus reduces the need for large amounts of memory on the adapter itself. AGP runs at 66 MHz—twice as fast as the PCI bus—and can support data transfer speeds of up to 533 Mb per second. *See also* PCI local bus.

AI *n.* *See* artificial intelligence.

.aiff *n.* The file extension that identifies audio files in the sound format originally used on Apple and Silicon Graphics (SGI) computers.

AIFF *n.* The sound format originally used on Apple and Silicon Graphics (SGI) computers. AIFF stores waveform files in an 8-bit monaural format. *See also* waveform.

AIX *n.* Acronym for Advanced Interactive Executive. A version of the UNIX operating system developed and maintained by IBM for its UNIX workstations and PCs.

alarm *n.* A visual or auditory signal from a computer alerting the user to an error or hazardous situation.

alert *n.* **1.** In many operating systems with GUIs (graphical user interfaces), an audible or visual alarm that signals an error or represents a warning of some sort. *See also* alert box. **2.** In programming, an asynchronous notification sent by one thread to another.

The alert interrupts the recipient thread at defined points in its execution and causes it to execute an asynchronous procedure call. *See also* asynchronous procedure call, thread (definition 1).

alert box *n.* An on-screen box, in a GUI (graphical user interface), that is used to deliver a message or warning. *Compare* dialog box.

ALGOL *al'gäl, al'gôl* *n.* Acronym for **Algorithmic Language**. The first structured procedural programming language, developed in the late 1950s and once widely used in Europe.

algorithm *n.* A finite sequence of steps for solving a logical or mathematical problem or performing a task.

algorithmic language *n.* A programming language, such as Ada, Basic, C, or Pascal, that uses algorithms for problem solving.

Algorithmic Language *n.* *See* ALGOL.

alias *n.* **1.** An alternative label for some object, such as a file or data collection. **2.** A name used to direct e-mail messages to a person or group of people on a network. **3.** A false signal that results from the digitization of an analog audio sample.

aliasing *n.* In computer graphics, the jagged appearance of curves or diagonal lines on a display screen, which is caused by low screen resolution. *See* the illustration.



Aliasing. The lower resolution of the image on the right reveals the aliasing effect.

aliasing bug *n.* A class of subtle programming errors that can arise in code that performs dynamic allocation. If several pointers address the same chunk of storage, the program may free the storage using one of the pointers, but then attempt to use another one (an alias), which would no longer be pointing to the desired data. This bug is avoidable by the use of allocation strategies that never use more than one copy of a pointer to allocated core memory, or by the use of higher-level languages, such as LISP, which employ a garbage collection feature. *Also called* stale pointer bug. *See also* alias, dynamic allocation, garbage collection.

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file server

an operating system or the physical placement of program files.

s, numbers, and allowable to distinguish it from all directory on a disk. A which a computer user of information. Both pro- nes and often extensions e or purpose of the file. as maximum length and lename, vary from one r. *See also* directory, path

extension (definition 1).

or device by which the file are maintained.

range from allowing read- passwords to covering the disk and locking away rive files.

of reconstructing lost or files are lost when they are on-disk information aged, or when the disk is involves the use of utility build on-disk information of deleted files. Because disk space available but data that has not yet been ed. In the case of damaged programs read whatever raw e the data to a new disk or binary or hexadecimal) owever, such reconstructed meous or mixed informa- le. The best way to recover backup copy.

accessing a data file, trans- action to the machine

device on a local area net- all users on the network.

appears to the user as a rver is a sophisticated de- es but manages them and

file sharing

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 *n.* The use of computer files on networks, wherein files are stored on a central computer or a 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 *n.* 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 actual 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 is larger than the logical size of the file.

filespec *n.* *See* file specification (definition 1).

file specification *n.* **1.** 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. **2.** A filename containing wildcard characters that indicate which files among a group of similarly named files are requested. **3.** A document that describes the organization of data within a file.

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

filter

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

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

File Transfer Protocol *n.* *See* FTP¹ (definition 1).

file type *n.* A designation of the operational or structural characteristics of a file. A file's type is often identified in the filename, usually in the filename extension. *See also* file format.

fill¹ *n.* In computer graphics, the colored or patterned "paint" inside an enclosed figure, such as a circle. 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.

fill² *vb.* To add color or a pattern to the enclosed portion of a circle or other shape.

film at 11 A phrase sometimes seen in newsgroups. An allusion to a brief newsbreak on TV that refers to a top news story that will be covered in full on the 11 o'clock news, it is used sarcastically to ridicule a previous article's lack of timeliness or newsworthiness. *See also* newsgroup.

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

film ribbon *n.* *See* carbon ribbon.

filter *n.* **1.** A program or set of features within 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 flag information of a certain age. **2.** 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) frequencies above it (a lowpass filter), those below it (a highpass filter), or those above and below it (a bandpass filter). **3.** A pattern or mask through which data is passed to weed out specified items. For instance, a filter used in e-mail or in retrieving newsgroup messages can allow users to filter out messages from other users. *See also* e-mail filter, mask. **4.** In com-

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