

# Exhibit 12



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Advanced Digital Network

agent

AGP

**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 on 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* chat<sup>1</sup> (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-

positories of inf user. Agents of Internet and are single type of ir postings on Use agent used on th agent. *See also* : tions, a process the server. **4.** In col (SNMP), a f *See also* SNMP.

**AGP** *n.* Acronym high-performan high-quality dis oped by Intel C point-to-point c troller and main enables AGP-ca ible chip sets to system memory ages more quick displayed when over the system' lows for storing texture maps in need for large a itself. AGP runs bus—and can st 533 Mb per sec

**AI** *n.* *See* artifici .aiff *n.* The file e the sound forma con Graphics (S

**AIFF** *n.* The sou and Silicon Gra waveform files i waveform.

**AIX** *n.* Acronym A version of the and maintained and PCs.

**alarm** *n.* A visua alerting the user

**alert** *n.* **1.** In mar (graphical user i that signals an e sort. *See also* al chronous notific

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aliasing bug

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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'göl\ *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.