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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 **a**way **f**rom **k**eyboard. 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[1] (definition 1).

AFP *n.* Acronym for **A**ppleTalk **F**iling **P**rotocol. A remote filing system protocol that provides a standard means for a workstation on an AppleTalk network to access and manipulate files on an AFP-implemented server. *Also called:* AppleShare File Server.

AFS *n.* Acronym for **A**ndrew **F**ile **S**ystem. A distributed file system that allows clients and servers to share resources through local-area and wide-area networks. AFS is based on a distributed file system developed at Carnegie-Mellon University, and is named for the university's founders—Andrew Carnegie and Andrew Mellon. AFS is now maintained and supplied by Transarc Corporation. *See also* distributed file system.

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 repositories 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.

aggregated links *n. See* link aggregation.

aggregation of links *n. See* link aggregation.

AGP *n.* Acronym for **A**ccelerated **G**raphics **P**ort. 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 Mbps. *See also* PCI local bus.

AH *n.* **A**uthentication **H**eader. A form of IP packet authentication included in the IPSec security standard. AH attaches a header to the packet with authentication information but does not encrypt the packet data, which allows its use in cases where encryption is not allowed. *See also* ESP, IPSec.

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.

AIM *n.* Acronym for **A**merica Online **I**nstant **M**essenger. A popular instant-messaging service provided for free by America Online. With the AIM service, instant messages can be sent over an Internet connection using the AIM software or directly from a Web browser using AIM Express. *See also* America Online, instant messaging. *Compare* ICQ, .NET Messenger Service, Yahoo! Messenger.

AirPort *n.* A wireless connectivity option introduced by Apple in 1999. AirPort provides wireless network and Internet communications to all AirPort card–equipped Macintosh computers within 150 feet of an AirPort base station. AirPort was developed around the IEEE 802.11 Direct Sequence Spectrum (DSSS) industry standard and is interoperable with other 802.11-based equipment.

AirSnort *n.* A hacking tool used to gather and decrypt passwords in data sent over wireless networks. AirSnort monitors wireless transmissions and collects packets of data. When it has collected enough data, AirSnort is able to compute the encryption key used in the transmission. AirSnort takes advantage of security flaws in the Wired Equivalent Protocol (WEP) standard. *See also* password sniffing.

AIX *n.* Acronym for **A**dvanced **I**nteractive E**x**ecutive. A version of the UNIX operating system developed and maintained by IBM for its UNIX workstations and PCs.

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OAGI *n.* Acronym for **O**pen **A**pplications **G**roup, **I**nc. A nonprofit consortium of software vendors and businesses created to develop and define XML-based interoperability specifications and standards among enterprise-scale applications. The OAGI was formed in 1995 by a small number of business enterprise software companies and organizations and has grown to more than sixty member companies.

OAGIS *n.* Acronym for **O**pen **A**pplications **G**roup **I**ntegration **S**pecification. A set of XML-based specifications and standards designed to promote B2B e-commerce by providing interoperability between enterprise-scale applications and between companies. OAGIS includes business document specifications and definitions, business process scenarios, and templates for business forms such as invoices and requisitions. OAGIS is overseen by the Open Applications Group, Inc., a nonprofit consortium of software vendors and customers. *See also* OAGI.

OASIS *n.* Acronym for **O**rganization for the **A**dvancement of **S**tructured **I**nformation **S**tandards. A consortium of technology companies formed to develop guidelines for use of XML (Extensible Markup Language) and related information standards.

Oberon *n.* An extensible object-oriented language based on Modula-2, whose later versions support the .NET Framework. *Also called:* Active Oberon for .NET.

object *n.* **1.** Short for object code (machine-readable code). **2.** In object-oriented programming, a variable comprising both routines and data that is treated as a discrete entity. *See also* abstract data type, module (definition 1), object-oriented programming. **3.** In graphics, a distinct entity. For example, a bouncing ball might be an object in a graphics program. **4.** A single, runtime instance of object type that the operating system defines. Objects visible in user mode include event, file, I/O completion port, key, object directory, port, process, section, semaphore, symbolic link, thread, timer, and token objects. Many user-mode objects are implemented through the use of a corresponding kernel-mode object. Kernel-mode-only objects include adapter, APC, controller, device, device queue, DPC, driver, interrupt, mutex, and stream file objects.

object code *n.* The code, generated by a compiler or an assembler, that was translated from the source code of a program. The term most commonly refers to machine code that can be directly executed by the system's central processing unit (CPU), but it can also be assembly language source code or a variation of machine code. *See also* central processing unit.

object computer *n.* The computer that is the target of a specific communications attempt.

object database *n. See* object-oriented database.

Object Database Management Group *n.* An organization that promotes standards for object databases and defines interfaces to object databases. *Acronym:* ODMG. *See also* OMG.

object file *n.* A file containing object code, usually the output of a compiler or an assembler and the input for a linker. *See also* assembler, compiler (definition 2), linker, object code.

Objective-C *n.* An object-oriented version of the C language developed in 1984 by Brad Cox. It is most widely known for being the standard development language for the NeXT operating system. *See also* object-oriented programming.

object linking and embedding *n. See* OLE.

Object Management Architecture *n. See* OMA.

Object Management Group *n. See* OMG.

object model *n.* **1.** The structural foundation for an object-oriented language, such as C++. This foundation includes such principles as abstraction, concurrency, encapsulation, hierarchy, persistence, polymorphism, and typing. *See also* abstract data type, object (definition 2), object-oriented programming, polymorphism. **2.** The structural foundation for an object-oriented design. *See also* object-oriented design. **3.** The structural foundation for an object-oriented application.

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object module *n.* In programming, the object-code (compiled) version of a source-code file that is usually a collection of routines and is ready to be linked with other object modules. *See also* linker, module (definition 1), object code.

object-oriented *adj.* Of, pertaining to, or being a system or language that supports the use of objects. *See also* object (definition 2).

object-oriented analysis *n.* A procedure that identifies the component objects and system requirements of a system or process that involves computers and describes how they interact to perform specific tasks. The reuse of existing solutions is an objective of this sort of analysis. Object-oriented analysis generally precedes object-oriented design or object-oriented programming when a new object-oriented computer system or new software is developed. *See also* object (definition 2), object-oriented design, object-oriented programming.

object-oriented database *n.* A flexible database that supports the use of abstract data types, objects, and classes and that can store a wide range of data, often including sound, video, and graphics, in addition to text and numbers. Some object-oriented databases allow data retrieval procedures and rules for processing data to be stored along with the data or in place of the data. This allows the data to be stored in areas other than in the physical database, which is often desirable when the data files are large, such as those for video files. *Acronym:* OODB. *See also* abstract data type, class, object (definition 2). *Compare* relational database.

object-oriented design *n.* A modular approach to creating a software product or computer system, in which the modules (objects) can be easily and affordably adapted to meet new needs. Object-oriented design generally comes after object-oriented analysis of the product or system and before any actual programming. *See also* object (definition 2), object-oriented analysis.

object-oriented graphics *n.* Computer graphics that are based on the use of graphics primitives, such as lines, curves, circles, and squares. Object-oriented graphics, used in applications such as computer-aided design and drawing and illustration programs, describe an image mathematically as a set of instructions for creating the objects in the image. This approach contrasts with the use of bitmapped graphics, in which a graphic is represented as a group of black-and-white or colored dots arranged in a certain pattern. Object-oriented graphics enable the user to manipulate objects as units. Because objects are described mathematically, object-oriented graphics can be layered, rotated, and magnified relatively easily. *Also called:* structured graphics. *See also* graphics primitive. *Compare* bitmapped graphics, paint program.

object-oriented interface *n.* A user interface in which elements of the system are represented by visible screen entities, such as icons, that are used to manipulate the system elements. Object-oriented display interfaces do not necessarily imply any relation to object-oriented programming. *See also* object-oriented graphics.

object-oriented operating system *n.* An operating system based on objects and designed in a way that facilitates software development by third parties, using an object-oriented design. *See also* object (definition 2), object-oriented design.

object-oriented programming *n.* A programming paradigm in which a program is viewed as a collection of discrete objects that are self-contained collections of data structures and routines that interact with other objects. *Acronym:* OOP. *See also* C++, object (definition 2), Objective-C.

Object Pascal *n.* An object-oriented derivative of Pascal. *See also* Pascal.

object-relational server *n.* A database server that supports object-oriented management of complex data types in a relational database. *See also* database server, relational database.

object request broker *n. See* ORB.

object wrapper *n.* In object-oriented applications, a means of encapsulating a set of services provided by a non-object-oriented application so that the encapsulated services can be treated as an object. *See also* object (definition 2).

oblique *adj.* Describing a style of text created by slanting a roman font to simulate italics when a true italic font isn't available on the computer or printer. *See also* font, italic, roman.

OC3 *n.* Short for **o**ptical **c**arrier **3**. One of several optical signal circuits used in the SONET high-speed fiberoptic data transmission system. OC3 carries a signal of 155.52 Mbps, the minimum transmission speed for which SONET and the European standard, SDH, are fully interoperable. *See also* SONET.

OCR *n. See* optical character recognition.

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user interface *n.* The portion of a program with which a user interacts. Types of user interfaces, or UIs, include command-line interfaces, menu-driven interfaces, and graphical user interfaces. *Acronym:* UI.

User Interface Toolbox *n. See* Toolbox.

username *n.* The name by which a user is identified to a computer system or network. During the logon process, the user must enter the username and the correct password. If the system or network is connected to the Internet, the username generally corresponds to the leftmost part of the user's e-mail address (the portion preceding the @ sign, as in username@company.com). *See also* e-mail address, logon.

user name *n.* The name by which a person is known and addressed on a communications network. *See also* alias (definition 2).

user profile *n.* A computer-based record maintained about an authorized user of a multiuser computer system. A user profile is needed for security and other reasons; it can contain such information as the person's access restrictions, mailbox location, type of terminal, and so on. *See also* user account.

user state *n.* The least privileged of the modes in which a Motorola 680x0 microprocessor can operate. This is the mode in which application programs are run. *See also* 68000. *Compare* supervisor state.

USnail *n.* **1.** Slang for the United States Postal Service. USnail, a term used on the Internet, is a reference to how slow the postal service is in comparison to e-mail. **2.** Mail delivered by the United States Postal Service. *See also* snail mail.

/usr *n.* A directory in a computer system that contains subdirectories owned or maintained by individual users of the computer system. These subdirectories can contain files and additional subdirectories. Typically, /usr directories are used in UNIX systems and can be found on many FTP sites. *See also* FTP site.

USRT *n.* Acronym for **u**niversal **s**ynchronous **r**eceiver-**t**ransmitter. A module, usually composed of a single integrated circuit, that contains both the receiving and transmitting circuits required for synchronous serial communication. *Compare* UART.

UTC *n. See* Universal Time Coordinate.

UTF-8 *n.* Acronym for **U**CS **T**ransformation **F**ormat **8**. A character set for protocols evolving beyond the use of ASCII. The UTF-8 protocol provides for support of extended ASCII characters and translation of UCS-2, an international 16-bit Unicode character set. UTF-8 enables a far greater range of names than can be achieved using ASCII or extended ASCII encoding for character data. *See also* ASCII, Unicode.

utility *n.* A program designed to perform a particular function; the term usually refers to software that solves narrowly focused problems or those related to computer system management. *See also* application.

utility program *n.* A program designed to perform maintenance work on the system or on system components (for example, a storage backup program, disk and file recovery program, or resource editor).

UTP *n.* Acronym for **u**nshielded **t**wisted **p**air. A cable containing one or more twisted pairs of wires without additional shielding. UTP is more flexible and takes up less space than shielded twisted-pair (STP) cable but has less bandwidth. See the illustration. *See also* twisted-pair cable. *Compare* STP.

UTP.

.uu *n.* The file extension for a binary file that has been translated into ASCII format using uuencode. *Also called:* .uud. *See also* ASCII, binary file, uuencode[1]. *Compare* .uue.

UUCP *n.* Acronym for **U**NIX-to-**U**NIX **Co**p**y**. A set of software programs that facilitates transmission of information between UNIX systems using serial data connec-

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