

EXHIBIT 46

WEBSTER'S NEW WORLD™

COMPUTER DICTIONARY

TENTH EDITION

The Best Computer Dictionary Anywhere

Revised and updated

Contains extensive coverage of Internet and multimedia terms

Over 4,750 words, phrases, abbreviations, and acronyms

BRYAN PFAFFENBERGER

WE DEFINE YOUR WORLD™

Webster's New World™ Computer Dictionary, 10th Edition

Copyright © 2003 by Wiley Publishing, Inc., Indianapolis, Indiana

Published by Wiley Publishing, Inc., Indianapolis, Indiana
Published simultaneously in Canada

No part of this publication may be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, scanning or otherwise, except as permitted under Sections 107 or 108 of the 1976 United States Copyright Act, without either the prior written permission of the Publisher, or authorization through payment of the appropriate per-copy fee to the Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923, (978) 750-8400, fax (978) 646-8700. Requests to the Publisher for permission should be addressed to the Legal Department, Wiley Publishing, Inc., 10475 Crosspoint Blvd., Indianapolis, IN 46256, (317) 572-3447, fax (317) 572-4447, E-mail: permcoordinator@wiley.com.

Trademarks: Wiley, the Wiley Publishing logo, Webster's New World, and the Webster's New World logo are trademarks or registered trademarks of Wiley Publishing, Inc., in the United States and other countries, and may not be used without written permission. All other trademarks are the property of their respective owners. Wiley Publishing, Inc., is not associated with any product or vendor mentioned in this book.

Limit of Liability/Disclaimer of Warranty: While the publisher and author have used their best efforts in preparing this book, they make no representations or warranties with respect to the accuracy or completeness of the contents of this book and specifically disclaim any implied warranties of merchantability or fitness for a particular purpose. No warranty may be created or extended by sales representatives or written sales materials. The advice and strategies contained herein may not be suitable for your situation. You should consult with a professional where appropriate. Neither the publisher nor author shall be liable for any loss of profit or any other commercial damages, including but not limited to special, incidental, consequential, or other damages.

For general information on our other products and services or to obtain technical support please contact our Customer Care Department within the U.S. at 800-762-2974, outside the U.S. at 317-572-3993 or fax 317-572-4002.

Wiley also publishes its books in a variety of electronic formats. Some content that appears in print may not be available in electronic books.

Library of Congress Cataloging-in-Publication Data is available from the publisher.

ISBN 978-0-7645-2478-3

Manufactured in the United States of America

10 9 8 7 6 5 4

Dedication

Acknowledgments

No work of this sort could be completed without the help of many people. This book is no exception. I would like to thank the following people for their help: M. Faunette Johnston for her help in bringing to fruition the project. Ultimately, though, the book is mine alone, so please do not consider my contribution reflected in the acknowledgments.

About the author

Bryan Pfaffenberger is an assistant professor at the University of Virginia. For the public, he is the author of the book *Technology*.

Trademarks

All terms in this book that are properly capitalized. Wiley Publishing, Inc. Use of a term in this book does not constitute an endorsement or service mark.

receivers in a group. See *broadcast*, *multicast*, *unicast*.

AOL See *America Online*.

Apache A popular, open-source Web server that currently powers more than half of all websites. Originally developed by programmers who were using a Web server daemon called *httpd*, developed at the National Center for Supercomputing Applications (NCSA). These programmers fixed errors in *httpd* and modified it by releasing a series of software patches. Over time, they had created a more sophisticated Web server, which they called Apache because it was "a patchy" version of *httpd*. These programmers went on to found The Apache Software Foundation, which creates a wide range of open source software and tools. Apache has grown into an exceptionally powerful Web server that offers a host of advanced features, including SSL security and Web scripting integration. Versions are available for Unix (including Linux) and for 32-bit Microsoft Windows server operating systems, including Windows NT Server, Windows 2000 Server, and Windows XP Server. Apache's popularity has been fueled by the rapid penetration of Linux into the lower-end Wintel-based server market, formerly the exclusive domain of Windows NT. An additional reason for Apache's popularity is the program's excellent reputation for security; when security holes appear, the community quickly develops solutions that are immediately available on the Internet. See *open source software (OSS)*, *Web server*.

APA graphic See *bitmapped graphic*.

aperture grille The equivalent of a shadow mask in Sony Trinitron monitors and monitors of similar design. Aperture grilles use vertical wires to direct electron beams to phosphors of a particular color. Slot pitch and screen pitch are the Trinitron equivalent of dot pitch, so compare monitors on those specifications.

API See *application program interface*.

APL Acronym for A Programming Language, a high-level programming language well suited for scientific and mathematical applications. APL uses Greek letters and requires a display device that can display these letters. Previously used only on IBM mainframes, the language is now available for IBM PC-compatible computers.

A-Plus A certification program developed by the Computing Technology Industry Association. Designed for entry-level service technicians, the program is based on a two-part examination that covers core knowledge as well as Microsoft Windows.

APM See *Advanced Power Management*.

app Common slang expression for application or applet.

append To add data at the end of a file or a database. In database management, for example, to append a record is to add a new record after all existing records.

Apple Desktop Bus (ADB) An interface for connecting keyboards, mouse devices, trackballs, and other input devices to Macintosh computers. These computers come with an ADB serial port capable of a maximum data transfer rate of 4.5 Kbps. It is possible to connect up to 16 devices to one ADB port, with each additional device daisy-chained to the previous device. See *asynchronous communication*.

Apple Desktop Interface (ADI) A set of user interface guidelines, developed by Apple Computer and published by Addison-Wesley, intended to ensure that the appearance and operation of all Macintosh applications are similar.

Apple File Exchange A utility program provided with each Macintosh computer that allows Macs equipped with suitable floppy disk drives to exchange data with IBM PC-compatible computers.

Apple Pro keyboard The standard keyboard for the Macintosh, which replaces

programming
 programming lan-
 guage and
 Greek
 keys that can
 only on
 now avail-
 computers.

devel-
 technology
 entry-
 gram is
 that cov-
 Microsoft

it.

appli-

or
 for
 new

ter-
 ce
 es
 ps

the extended keyboard. This 108-key keyboard includes alphanumeric keys, cursor control keys, 15 programmable function keys, and a key for ejecting CDs and DVDs.

AppleShare A file server utility for AppleTalk networks. AppleShare transforms any Macintosh on the network into a dedicated file server; the server's hard disk icon appears on every network user's desktop.

applet 1. A small to medium-sized computer program that provides a specific function, such as emulating a calculator. **2.** In Java, a miniprogram embedded in a Web document that, when downloaded, is executed by the browser. Both of the leading browsers (Netscape Communicator and Microsoft Internet Explorer) can execute Java applets. See *Java applet*, *Java application*.

AppleTalk A local area network (LAN) standard developed by Apple Computer. AppleTalk can link as many as 32 Macintosh computers, IBM PC-compatible computers, and peripherals such as laser printers. Every Macintosh computer has an AppleTalk port; the only hardware required for an AppleTalk network is a set of LocalTalk connectors and ordinary telephone wire for cables (called twisted-pair cable). AppleTalk networks are simple and inexpensive but quite slow; they are capable of transmitting only up to 230 Kbps. EtherTalk, in contrast, is capable of speeds of up to 10 million bps. See *EtherTalk*.

appliance server A network server program that enables non-programmers to make data and documents available to others without requiring advanced technical expertise.

application A program that enables a user to do something useful with the computer, such as writing or accounting (as opposed to utilities, programs that help the user maintain the computer).

application binary interface (ABI) A set of communications standards that specifies how a binary executable file should interface with computer hardware.

Application Configuration Access Protocol (ACAP) A proposed Internet standard that transfers crucial user configuration settings (including address books, bookmarks, and options choices) to an Internet-accessible file. Because these settings are stored on the network instead of the user's computer, they are accessible no matter which computer is being used. ACAP will greatly benefit anyone who accesses the Internet from more than one computer.

application control menu See *control menu*.

application development system A coordinated set of program development tools, typically including a full-screen editor; a programming language with a compiler, linker, and debugger; and an extensive library of ready-to-use program modules. The use of an application development system lets experienced users develop a standalone application more easily than writing a program using a language such as C++ or COBOL.

application heap In the Macintosh computer architecture, the base memory, the area of memory set aside for user programs.

application icon In a graphical user interface (GUI), an onscreen graphic representation of a minimized program. The icon appears on the taskbar to remind the user that the application is still present in memory. Double-clicking the application re-displays the program. See *minimize*.

application layer In the Open System Interconnection (OSI) reference model of computer network architecture, the first or topmost of seven layers, in which the data is presented to the user. At this layer, protocols are needed to ensure that products made by different manufacturers can work together. For example, every e-mail program should use the same protocols for sending and receiving e-mail. When the data is ready to be sent to the network, it is passed down

the protocol stack to the next layer, the presentation layer. See *layer, OSI Reference Model, protocol stack*.

application-level encryption In a computer network, the implementation of encryption by individual applications rather than at the operating system or network level. Web browsers typically implement encryption at this level.

application program See *application*.

application program interface (API)

1. A set of standards or conventions by which programs can call specific operating system or network services. 2. In Web servers, the standards or conventions that enable a hyperlink to originate a call to a program that is external to the server. See *CGI, ISAPI, NSAPI*.

application shortcut key In Microsoft Windows, a shortcut key assigned to launch or bring an application to the foreground. Application shortcut keys are also available in applications such as DESQview and PC Tools Desktop to launch and switch among programs.

application software Programs that perform specific tasks (such as word processing or database management), in contrast to system software (which maintains and organizes the computer system), and utilities, which help to maintain and organize the system.

application window In a graphical user interface (GUI), an application's main window, containing a title bar, the application's menu bar, and a work area. The work area can contain one or more document windows. See *window*.

A Programming Language See *APL*.

apptent An Internet-accessible resource that combines a computer application (ap) with Web-based textual and graphic content (tent). The term aptly describes many of the Web's most popular destinations and features, including search engines, discussion sites, and guest books.

arbitrator In a computer operating system, a program module that handles peripherals' competing demands for the processing unit's resources and allocates hardware resources among the various devices.

architecture 1. The overall conceptual design and design philosophy of a hardware device or computer system or network. 2. The specific configuration of hardware and software that determines the capabilities of a computer system or computer network.

archival backup A backup procedure in which a backup utility backs up all files on the hard disk by copying them to floppy disks, tape, or some other backup medium. See *incremental backup*.

archive 1. An infrequently accessed but comprehensive collection of data. 2. A file designed for space-efficient storage or distribution that contains two or more original files. In Unix, the most popular archive program is tar, which lacks compression capabilities. In Microsoft Windows, WinZip is the most popular archiving and compression program, while StuffIt holds this place among Macintosh users. See *extraction*.

archive attribute In MS-DOS and Microsoft Windows file systems, a hidden code, stored with a file's directory entry, that indicates whether the file has been changed since it was last copied using XCOPY or a backup utility.

archive bit A file attribute that is used to indicate whether the file has been backed up. If so, the archive bit is set to 1. If the file has been altered since it was last backed up, or if the file has never been backed up, the archive bit is set to 0. Backup software is designed to clear the archive bit (that is, set the bit to 0) when full backups and incremental backups are performed. When a differential backup is performed, the archive bit is not cleared. See *backup, differential backup, full backup, incremental backup*.

archive site An Internet-accessible computer that serves as a repository for a large

or complete collection of data, the messages exchanged on a newsgroup. Synonymous with archive sites are frequent because archive sites are frequent by FTP programs.

ARCnet A popular local area network (LAN) originally developed by Digital Equipment Corporation for IBM PC-computers and now available from many vendors. ARCnet interface cards from many vendors can be purchased for a few dollars. ARCnet networks use a star topology, a token passing protocol, and coaxial or twisted pair cable. The network can transmit data at speeds of 2.5MB per second. See *topology, NIC*.

area graph A line graph in which the area below the line is filled in to show the change in volume from one period to the next. The x-axis (category) is the horizontal axis, and the y-axis (value) is the vertical axis.

areal density The tightness with which data can be packed onto a hard disk. Both the smoothness of the disk surface and the nature of the data affect areal density, expressed in megabits per square inch (Mb/in²). Areal densities of 100Mb/in² and 200Mb/in² are common on modern hard disks.

argument 1. In a program, a value that calls a routine, a value that provides data for the routine, or that tells the routine which operation to perform when processing this data. For example, if the statement calls a routine with arguments 1, 2, and 3, the numbers, the argument tells the routine how many decimal places to use. The term is often used synonymously with parameter but in some usages the term parameter is used to refer to nonoptional values that are subject to change. 2. In computer interfaces and applications, a typed command (such as a switch value or option that modifies how a command is carried out. See *parameter*.

argument separator In computer programs and programming

1 In typesetting, a unit of measurement that equals half the width of an em space, which is the width of the capital letter *M* in typeface. En dashes are used in place of the English words *to* or *through*, as in January 9–January 23 or Pages 63–68. They are used as minus signs, as in –30 degrees Fahrenheit. See *em dash*.

encapsulated PostScript (EPS) file A high-resolution graphic image stored in the PostScript page description language. The PostScript standard enables users to transfer high-resolution graphics images between applications. One can size EPS images without sacrificing image quality. A major drawback of EPS graphics is that to print them, one usually needs a PostScript-compatible laser printer. A second drawback is that with most application programs, one cannot view the image onscreen unless he/she attaches a screen image to it. To provide an alternative to expensive PostScript printers, developers have created PostScript interpreters, such as LaserGo, Inc.'s GoScript that interpret and print EPS files on non-PostScript printers. See *PostScript*.

encapsulation 1. In computer networks such as the Internet, the process by which transmitted data is altered as it moves down the computer's protocol stack. As each layer's protocols alter the data, it is translated into a form that can be sent out over the network. At the receiving computer, this process is reversed so that the data is stored in such a form that it can be passed to an application and made intelligible to the user. See *OSI Reference Model*, *TCP/IP*.

In object-oriented programming, one of the seven fundamental principles of the object model. The encapsulation principle states that the details of an object's inner workings (the way in which its data are stored and its behaviors are functionally defined and implemented) should not be available to other objects; instead, the object employs an interface that, by means of a common communication protocol, enables other objects to make use of the object's methods without their having to know

anything about how the methods work. The encapsulation principle is based on long experience with complex, sequential programs, in which major errors are likely to occur if functions are accessed in a way that was not predicted when the program was written. See *object*, *object model*, *object-oriented programming*.

encryption In cryptography, the process of converting a message into a ciphertext (an encrypted message) by using a key so that the message appears to be nothing but gibberish. However, the intended recipient can apply the key to decrypt and read the message. See *decryption*, *public key cryptography*, *rot-13*.

encryption algorithm A procedure for scrambling (encrypting) data so that it cannot be read by anyone other than its intended recipient. The two major types of encryption algorithms are symmetric key encryption algorithms, which require a secure channel to transmit the decoding key to the user, and public key encryption.

encryption engine An encryption program that can perform encryption and decryption services for two or more compatible applications.

End key A key on IBM PC-compatible keyboards with functions that vary from program to program. Frequently, pressing the End key moves the cursor to the end of the line or the bottom of the screen, but the assignment of this key is up to the programmer.

endless loop A fundamental programming error in which the computer is made to cycle in a repeating loop, which cannot be broken without shutting down the computer.

endnote A footnote positioned at the end of a document or section rather than the bottom of a page. Many word processing programs let the user choose between footnotes and endnotes.

end of file See *EOF*.

end of line See *EOL*.

end user The person who uses a computer system and its application programs at home or at work to perform tasks and produce results.

end user license agreement See *EULA*.

Energy Star A U.S. Environmental Protection Agency (EPA) program that seeks to reduce energy waste by encouraging monitor and printer manufacturers to reduce the amount of electricity that their devices require. Energy Star devices typically have a sleep mode that reduces their power consumption when they are not being used. Energy Star devices, identifiable by a blue and green EPA sticker, can save their owners hundreds of dollars in electrical costs each year. See *power management*.

en fraction A single-character fraction that occupies one em of space and uses a horizontal stroke, like this: $\frac{1}{2}$. Contrast to em fractions, which are built with regular-width characters, like this: 1/2.

engine A program that performs services for other applications, such as encryption or file compression.

enhanced 101-key keyboard See *enhanced keyboard*.

Enhanced ATA See *Enhanced IDE (EIDE)*.

Enhanced CD A standard created by Microsoft Corporation for audio compact discs. This standard enables audio CD publishers to include digital information on compact discs; for example, a performer could include pictures and video clips on an audio CD that can be displayed on a PC.

Enhanced Expanded Memory Specification (EEMS) A version of the original Lotus-Intel-Microsoft Expanded Memory Specification (LIM EMS) that is enhanced to enable DOS applications to use more than 640K of memory.

open tag In markup languages such as SGML, XML, and HTML, the series of characters that demarcates the beginning of a markup element. In HTML, <blockquote> is the open tag for the blockquote element; </blockquote> is the closing tag. See *HTML*, *markup language*, *SGML*, *XML*.

OpenWindows A graphical user interface (GUI) developed by Sun Microsystems that is based on the X Window System standard for Unix computers. See *Motif*.

operand The argument that is appended to an operator, such as a spreadsheet program's built-in function. For example, in the Excel expression AVERAGE(D10:D24), the cell range D10 to D24 is the operand of the AVERAGE function.

operating environment The total context in which applications function, including the operating system and hardware platform.

Operating System/2 See *OS/2*.

operating system (OS) A master control program that manages the computer's internal functions, such as accepting keyboard input, and that provides a means to control the computer's operations and file system. Typically, a computer's operating system is automatically loaded into memory when the computer is powered on; this operation is called booting.

Most operating systems are designed to run on a specific hardware platform. Still, it is possible to write operating systems in such a way that they can be ported (translated) so that they run on different hardware platforms. This is done by creating the operating system in such a way that most of the components are designed to function at a level of abstraction beyond the hardware level. Although operating systems vary, almost all of the features that are today regarded as essential to an operating system have their origin in Unix, which was developed at AT&T's Bell Laboratories (and subsequently by university professors and graduate students) during the 1970s

and 1980s, as well as its ill-fated predecessor, Multics, and certain other early systems. By the mid-1980s, Unix had successfully incorporated preemptive multitasking, multithreading, multiuser capabilities, interprocess communication, application programming interfaces (API), multiprocessing, and other key innovations. With these features, Unix enables two or more applications to run simultaneously without interfering with each other's use of the memory (preemptive multitasking), permits applications to run two or more of its tasks simultaneously (multithreading), enables two or more users to use the system as if each of them had sole control (multiuser capabilities), enable applications to exchange data and give each other instructions (interprocess communication), provides a standardized set of system calls by which programmers can access operating system functions (application programming interface), and exploits the capabilities of computer systems that have two or more CPUs (multiprocessing). Today, most leading operating systems emulate Unix's advanced features or directly incorporate Unix code; Mac OS X, for example, is built on BSD Unix; in addition, several versions of Microsoft's Windows NT-derived operating systems (including Windows 2000) are known to incorporate BSD code. Gaining market share more rapidly than any other operating system at this writing is Linux, a Unix-like operating system that is under development by a worldwide programming team.

Operating systems vary according to their intended function. Server operating systems (such as Unix, Unix-related operating systems such as Linux and FreeBSD, and Microsoft Windows XP Server) are designed to make data and applications available to other applications on a local area network or the Internet. Other operating systems (such as Microsoft Windows XP Home) are designed with the end user in mind, and do not burden the user with a server operating system's complexity. Still other operating systems, called embedded operating systems, are designed to be

installed in small, portable devices, including cellular phones and personal digital assistants (PDAs). See *application programming interface (API)*, *BSD*, *interprocess communication (IPC)*, *multiprocessing*, *multithreading*, *Plan 9*.

operating voltage The voltage range at which a microprocessor can operate. Most microprocessors have a voltage range of 5 volts. The 3.3-volt specification decided upon when the transistor was invented—3.3 volts to save electricity—has become standard in portable computers and other devices. See *output*.

operator In programming, a character or symbol that is used to denote a command or function, such as multiplication or division.

optical character recognition (OCR)

optical disc A large storage medium for computer information is stored on a disc with high density in the form of pits and lands. The presence or absence of pits is read by a focused laser beam. CD-ROMs and DVDs offer an increasing amount of storage medium for storing data. Write-once, read-many (WORM) discs enable organizations to create huge, in-house databases. Some optical disc drives combine good performance with the convenience of floppy disks; however, they are still more expensive and slower than hard drives. See *videodisk*.

optical fiber See *fiber optic*.

optical mouse Instead of a ball to communicate its movement, an optical mouse shines a beam of light on the surface beneath it and reads the reflection of that surface when the mouse moves. An optical mouse is more convenient than a ball mouse because it does not require cleaning.

and 1980s, as well as its ill-fated predecessor, Multics, and certain other early systems. By the mid-1980s, Unix had successfully incorporated preemptive multitasking, multithreading, multiuser capabilities, interprocess communication, application programming interfaces (API), multiprocessing, and other key innovations. With these features, Unix enables two or more applications to run simultaneously without interfering with each other's use of the memory (preemptive multitasking), permits applications to run two or more of its tasks simultaneously (multithreading), enables two or more users to use the system as if each of them had sole control (multiuser capabilities), enable applications to exchange data and give each other instructions (interprocess communication), provides a standardized set of system calls by which programmers can access operating system functions (application programming interface), and exploits the capabilities of computer systems that have two or more CPUs (multiprocessing). Today, most leading operating systems emulate Unix's advanced features or directly incorporate Unix code; Mac OS X, for example, is built on BSD Unix; in addition, several versions of Microsoft's Windows NT-derived operating systems (including Windows 2000) are known to incorporate BSD code. Gaining market share more rapidly than any other operating system at this writing is Linux, a Unix-like operating system that is under development by a worldwide programming team.

Operating systems vary according to their intended function. Server operating systems (such as Unix, Unix-related operating systems such as Linux and FreeBSD, and Microsoft Windows XP Server) are designed to make data and applications available to other applications on a local area network or the Internet. Other operating systems (such as Microsoft Windows XP Home) are designed with the end user in mind, and do not burden the user with a server operating system's complexity. Still other operating systems, called embedded operating systems, are designed to be

installed in small, dedicated devices, including cellular phones and personal digital assistants (PDAs). See *application programming interface (API)*, *BSD Unix*, *interprocess communication (IPC)*, *multiprocessing*, *multitasking*, *multithreading*, *Plan 9*, *preemptive multitasking*.

operating voltage The electrical voltage at which a microprocessor operates. Most microprocessors have operating voltages of 5 volts—a mostly arbitrary specification decided upon when the transistor was invented—but some chips run at 3.3 volts to save electricity (a real concern in portable computers) and reduce heat output.

operator In programming, a code name or symbol that is used to describe a command or function, such as multiplying or dividing.

optical character recognition See *OCR*.

optical disc A large-capacity data storage medium for computers on which information is stored at extremely high density in the form of tiny pits. The presence or absence of pits is read by a tightly focused laser beam. CD-ROMs and DVDs offer an increasingly economical medium for storing data and programs. Write-once, read-many (WORM) drives enable organizations to create their own huge, in-house databases. Erasable optical disc drives combine good storage capacity with the convenience of removable CDs; however, they are still more expensive and slower than hard drives. See *interactive videodisk*.

optical fiber See *fiber optics*.

optical mouse Instead of using a rubber ball to communicate its movement, an optical mouse shines a beam of light onto the surface beneath it and reads the changes in that surface when the mouse moves. An optical mouse is more convenient because it does not require cleaning.

optical resolution A measure of the sharpness with which a scanner can digitize an image without help from software. The more charge-coupled devices (CCDs) in a scanner (1200 is about average, and 4800 is very good), the better its optical resolution. By means of software interpolation, output can be improved, but software interpolation is a poor substitute for high optical resolution.

optical scanner See *scanner*.

optimal recalculation In Lotus 1-2-3 and other advanced spreadsheet programs, a method that speeds automatic recalculation by recalculating only those cells that have changed since the last recalculation.

optimizing compiler A compiler that translates source code into machine language optimized to run as efficiently as possible on a particular microprocessor. Optimizing compilers are virtually essential when preparing programs to run on any microprocessor equipped with superscalar architecture.

option button See *radio button*.

OR 1. In programming, a Boolean function that returns an expression as true if any of its arguments are true. **2.** In computer database searching, a Boolean operator that retrieves a document if it contains any of the specified search terms.

Oracle Corporation The leading manufacturer of relational database management systems (RDMS) for multiuser enterprise computing, and the first major database firm to adopt SQL as its standard query language.

ORB Acronym for object request broker. A standard for requesting services from objects in a distributed object architecture, a cross-platform computer network in which program modules can be written in any computer language but still supply needed functions to other applications. The standard is the work of the Object Management Group (OMG), an industry consortium that is developing standards for

in legend A type of folklore that is attributed by contemporary communications technologies rather than word of mouth. The Internet presents a fertile environment for the propagation of urban legends. Many are hoaxes with cruel intent; for example, a widely circulated but false rumor states that some 4,000 Israeli workers at the World Trade Center were told to come home from work on 9/11/2001.

U Abbreviation for uniform resource locator. In the Hypertext Transfer Protocol (HTTP), a string of characters that identifies an Internet resource, including the type of resource and its location. There are two types of URIs: uniform resource locators (URLs) and relative URLs. See *HTTP*, *URL*.

URL Acronym for uniform resource locator. On the World Wide Web, one of two basic kinds of Universal Resource Identifiers (URI), a string of characters that precisely identifies an Internet resource's type and location. For example, the following fictitious URL identifies a World Wide Web document (<http://www.wolverine.virginia.edu/~toros/winerefs/merlot.html>), indicates the domain name of the computer on which it is stored (www.wolverine.virginia.edu), fully describes the document's location within the directory structure ([~toros/winerefs/](http://www.wolverine.virginia.edu/~toros/winerefs/)), and includes the document's name and extension ([merlot.html](http://www.wolverine.virginia.edu/~toros/winerefs/merlot.html)):

<http://www.wolverine.virginia.edu/~toros/winerefs/merlot.html>

See *relative URL (RELURL)*.

USB Abbreviation for Universal Serial Bus. An interface standard that enables computer peripherals, such as keyboards, mice, printers, digital cameras, backup storage devices, and Ethernet ports, to be connected to a USB-compatible computer by means of an inexpensive cable. Capable of transferring data at a rate of 12 Mbps, USB represents an advance over the sluggish RS-232 serial ports built into most computers, but USB's speed is itself considered sluggish when compared to IEEE 1394 (also called FireWire), which enables data transfer rates of up to 400 Mbps. Some

USB peripherals can be connected or disconnected without shutting down the computer, in an operation called hot swapping. See *hot swapping*, *IEEE 1394*, *Plug and Play (PnP)*, *USB 2.0*.

USB 2.0 An upgraded USB standard that enables USB peripherals to compete with IEEE 1394 (FireWire) devices. It enables data transfer speeds of up to 480 Mbps while retaining downward compatibility with the initial USB standard (12 Mbps). See *downward-compatible*, *IEEE 1394*, *USB*.

Usenet A worldwide computer-based discussion system that uses the Internet and other networks for transmission media. Discussion is channeled into more than 30,000 topically named newsgroups, which contain original contributions called articles, as well as commentaries on these articles called follow-up posts. As follow-up posts continue to appear on a given subject, a thread of discussion emerges; a threaded newsreader collates these articles together so that readers can see the flow of the discussion. Usenet is accessed daily by more than 15 million people in more than 100 countries. See *Network News Transfer Protocol (NNTP)*.

Usenet site A computer system—one with lots of disk storage—that receives a news feed and enables dozens or hundreds of people to participate in Usenet. Currently, approximately 120,000 Usenet sites exist, providing an estimated 4 million people with access to Usenet newsgroups.

user See *end user*.

user agent (UA) In the terminology established by the OSI Reference Model, a client e-mail program that runs on the user's machine and assists in contacting a server. See *OSI Reference Model*.

User Datagram Protocol See *UDP*.

user default A user-defined program operating preference, such as the default margins for every new document that a word processing program creates. Also

called preferences, options, or setup in various applications.

user-defined Selected or chosen by the user of the computer system.

user-friendly A program or computer system designed so that individuals who lack extensive computer experience or training can use the system without becoming confused or frustrated.

user group A voluntary association of users of a specific computer system or program who meet regularly to exchange tips and techniques, hear presentations by computer experts, and obtain public domain software and shareware.

user interface All the features of a program or computer that govern the way people interact with the computer. See *command-driven program*, *graphical user interface (GUI)*.

UTC Abbreviation for Universal Coordinated Time. Formerly known as Greenwich Mean Time (GMT), UTC is a standard time at the Earth's prime meridian (0° longitude).

utility program A program that assists in maintaining and improving the efficiency of a computer system.

UUCP Acronym for Unix-to-Unix Copy Program. A network based on long-distance telephone uploads and downloads. UUCP allows Unix users to exchange files, e-mail, and Usenet articles. In the 1980s, when Internet connectivity was hard to come by, UUCP played an important role in providing support for the Unix operating system.

uudecode A Unix utility program that decodes a uuencoded ASCII file, restoring the original binary file (such as a program or graphic). A uudecode utility is needed to decode the binary files posted to Usenet. Most newsreading programs incorporate such a utility. See *newsreader*, *Usenet*, *uuencode*.