

OVER
10,000
ENTRIES

Microsoft

Computer Dictionary

Fifth Edition

- *Fully updated with the latest technologies, terms, and acronyms*
- *Easy to read, expertly illustrated*
- *Definitive coverage of hardware, software, the Internet, and more!*



PUBLISHED BY

Microsoft Press

A Division of Microsoft Corporation

One Microsoft Way

Redmond, Washington 98052-6399

Copyright © 2002 by Microsoft Corporation

All rights reserved. No part of the contents of this book may be reproduced or transmitted in any form or by any means without the written permission of the publisher.

Library of Congress Cataloging-in-Publication Data

Microsoft Computer Dictionary.--5th ed.

p. cm.

ISBN 0-7356-1495-4

1. Computers--Dictionaries. 2. Microcomputers--Dictionaries.

AQ76.5. M52267 2002

004'.03--dc21

200219714

Printed and bound in the United States of America.

2 3 4 5 6 7 8 9 QWT 7 6 5 4 3 2

Distributed in Canada by H.B. Fenn and Company Ltd.

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

Microsoft Press books are available through booksellers and distributors worldwide. For further information about international editions, contact your local Microsoft Corporation office or contact Microsoft Press International directly at fax (425) 936-7329. Visit our Web site at www.microsoft.com/mspress. Send comments to mspinput@microsoft.com.

Active Desktop, Active Directory, ActiveMovie, ActiveStore, ActiveSync, ActiveX, Authenticode, BackOffice, BizTalk, ClearType, Direct3D, DirectAnimation, DirectDraw, DirectInput, DirectMusic, DirectPlay, DirectShow, DirectSound, DirectX, Entourage, FoxPro, FrontPage, Hotmail, IntelliEye, IntelliMouse, IntelliSense, JScript, MapPoint, Microsoft, Microsoft Press, Mobile Explorer, MS-DOS, MSN, Music Central, NetMeeting, Outlook, PhotoDraw, PowerPoint, SharePoint, UltimateTV, Visio, Visual Basic, Visual C++, Visual FoxPro, Visual InterDev, Visual J++, Visual SourceSafe, Visual Studio, Win32, Win32s, Windows, Windows Media, Windows NT, Xbox are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries. Other product and company names mentioned herein may be the trademarks of their respective owners.

The example companies, organizations, products, domain names, e-mail addresses, logos, people, places, and events depicted herein are fictitious. No association with any real company, organization, product, domain name, e-mail address, logo, person, place, or event is intended or should be inferred.

Acquisitions Editor: Alex Blanton

Project Editor: Sandra Haynes

Body Part No. X08-41929

Introduction

The *Microsoft Computer Dictionary, Fifth Edition* is designed to be a comprehensive and authoritative source of definitions for computer-related terms and abbreviations. The dictionary includes terms drawn from a wide variety of topics relevant to computer users, including software, hardware, networking, data storage, graphics, games, information processing, the Internet and the World Wide Web, gaming, history, jargon and slang, organizations, programming, and standards.

Although this book covers nearly every aspect of computing, it does not include entries on most companies or on most makes and models of computers, nor does it contain entries on most application software products. The few exceptions to this rule of thumb are key companies and products that have a historical or universal importance within the computing industry.

This dictionary emphasizes terminology that the average computer user will encounter in documentation, online help, computer manuals, marketing and sales materials, the popular media, and the computer trade press. Because most computer users operate personal computers and desktop systems at home, work, or both, the majority of the entries in this dictionary cover the terminology used in describing and working with these systems. However, some specialized or highly technical language is included that pertains to areas of industry, academia, software and hardware development, and research. These terms have been included because they have a bearing on more common computer terminology or because they are of historical significance.

Changes in the Fifth Edition

The fifth edition of the *Microsoft Computer Dictionary* has been revised and expanded to include over 10,000 entries, reflecting the many advances in the computer field and

including several areas that have come into prominence in the public eye, such as networking, Web authoring, and new technologies, such as .NET. The content from the Year 2000 appendix has been integrated into the body of the dictionary and a new appendix on emoticons and instant messaging symbols has been added.

Order of Presentation

Entries are alphabetized by letter. Spaces are ignored, as are characters such as hyphens and slashes; for example, *Baud-dot code* falls between *baud* and *baud rate*, and *machine-independent* falls between *machine identification* and *machine instruction*. Numbers and symbols are located at the beginning of the book and are listed in ascending ASCII order. If an entry begins with a letter or letters but contains a number, it is listed alphabetically, according to the initial letter(s), and then according to ASCII order. Thus, V20 precedes V.2x, and both precede VAB.

Entries

Entries are of two types: main entries, which contain full definitions, and synonymous cross-references, which contain *See* references to the appropriate main entries. Synonymous cross-references are generally secondary or less common ways of referring to a main entry. The definition at the main entry can be substituted as a definition for the synonymous cross-reference.

Format

Information in each main entry is presented in a consistent format: entry name in boldface, spelling variants (if any), part of speech, definition, illustration or table reference (if any), acronym (if any), alternative names (if any), and cross-references (if any).

Main Entries

Entries that are acronyms or abbreviations for one or more words or concatenations of two or more words have those words spelled out at the beginning of the definition. The letters in these words or phrases that make up the acronym, abbreviation, or concatenation are in boldface.

When a main entry is spelled exactly the same as another main entry, the two entries are differentiated by the use of a superscript numeral after each term. These entries are called homographs, and they are generally different parts of speech. For example,

e-mail¹ (*noun*)

e-mail² (*verb*)

Spelling Variants

When a main entry has one or more variations in the way it is spelled, each spelling variant follows the main entry, after the word *or*.

Parts of Speech

Entries are broken down into four parts of speech, in addition to prefixes, abbreviated as follows:

n. noun

vb. verb

adj. adjective

adv. adverb

Definitions

Each of the more than 10,000 entries is written in clear, standard English. Many go beyond a simple definition to provide additional detail and to put the term in context for a typical computer user. When an entry has more than one sense or definition, the definitions are presented in a numbered list, to make it easier to distinguish the particular, sometimes subtle, variations in meaning.

Illustration and Table References

Some entries have affiliated illustrations or tables that aid in defining the entry. In most cases, illustrations and tables appear on the same page as the entries to which they apply.

In some instances, however, page layout requirements have forced them to a subsequent page. Entries with illustrations or tables usually have references at the end of the definition for an entry, in the following formats:

See the illustration.

See the table.

Acronyms

Some terminology in the computer field, particularly computer standards and Internet slang, can be shortened to form acronyms. Sometimes the acronym is the more common way to refer to the concept or object; in these cases, the acronym is the main entry. In other cases, the acronym is not as commonly used as the words or phrase for which it stands. In these cases, the words or phrase constitute the main entry. The acronym is given after the definition for these entries in the following format:

Acronym:

Alternative Names

Some items or concepts in the computer field can be referred to by more than one name. Generally, though, one way is preferred. The preferred terminology is the main entry. Alternative names are listed after any acronyms; otherwise they are listed after the definition in the following format:

Also called:

Cross-References

Cross-references are of three types: *See*, *See also*, and *Compare*. A *See* reference is used in an entry that is a synonymous cross-reference and simply points to another entry that contains the information sought. A *See also* reference points to one or more entries that contain additional or supplemental information about a topic and follows any acronyms or alternative names after the definition. A *Compare* reference points to an entry or entries that offer contrast and follows any *See also* references; otherwise it follows any acronyms or alternative names after the definition.

automatically identifying and configuring it for optimum performance. Peripherals can be connected while the computer is running (*hot plugging*) and are automatically assigned a unique address (auto-addressing). Developed from the I2 architecture designed jointly by Philips and Digital Equipment Corporation, the ACCESS.bus specification is controlled by the ACCESS.bus Industry Group and competes with Intel's USB. *See also* bidirectional, bus, daisy chain¹, hot plugging, input/output port, peripheral. *Compare* USB.

access code *n.* *See* password.

access control *n.* The mechanisms for limiting access to certain items of information or to certain controls based on users' identities and their membership in various predefined groups. Access control is typically used by system administrators for controlling user access to network resources, such as servers, directories, and files. *See also* access privileges, system administrator.

access control list *n.* A list associated with a file or a resource that contains information about which users or groups have permission to access a resource or modify the file. *Acronym:* ACL.

accessibility *n.* A quality of software, hardware, or a complete computer system that makes it usable by people with one or more physical disabilities, such as restricted mobility, blindness, or deafness.

accessibility aids *n.* Utilities that make computers easier to use for people with disabilities. Examples of accessibility aids include screen readers, speech recognition programs, and on-screen keyboards.

access key *n.* A key combination, such as ALT+F, that moves the focus to a menu, a command, or a control, without using the mouse.

access mechanism *n.* **1.** The disk drive components that move the read/write head(s) to the proper track of a magnetic disk or optical disc. *See also* disk controller. **2.** A circuit that allows one part of a computer system to send signals to another part. **3.** In programming, the means by which an application can read from or write to a resource. *Also called:* access method.

access method *n.* *See* access mechanism.

access number *n.* The telephone number used by a subscriber to gain access to an online service.

accessory *n.* *See* peripheral.

access path *n.* *See* search path.

access permission *n.* *See* permission.

access point *n.* In a wireless LAN (local area network), a transceiver that connects the LAN to a wired network. *See also* wireless LAN.

access privileges *n.* The type of operations permitted a given user for a certain system resource on a network or a file server. A variety of operations, such as the ability to access a server, view the contents of a directory, open or transfer files, and create, modify, or delete files or directories, can be allowed or disallowed by the system administrator. Assigning access privileges to users helps the system administrator to maintain security on the system, as well as the privacy of confidential information, and to allocate system resources, such as disk space. *Also called:* access rights. *See also* file protection, file server, permission, system administrator, write access.

access provider *n.* *See* ISP.

access rights *n.* *See* access privileges.

access speed *n.* *See* access time.

access time *n.* **1.** The amount of time it takes for data to be delivered from memory to the processor after the address for the data has been selected. **2.** The time needed for a read/write head in a disk drive to locate a track on a disk. Access time is usually measured in milliseconds and is used as a performance measure for hard disks and CD-ROM drives. *See also* read/write head, seek time, settling time, wait state. *Compare* cycle time.

account *n.* **1.** A record-keeping arrangement used by the vendor of an online service to identify a subscriber and to maintain a record of customer usage for billing purposes. **2.** The record-keeping mechanism used by networks and multiuser operating systems for keeping track of authorized users. Network accounts are created by network administrators and are used both to validate users and to administer policies—for example, permissions—related to each user.

accounting file *n.* A file generated by a printer controller that keeps track of the number of pages printed per job as well as the user that requested the print job.

accounting machine *n.* **1.** One of the earliest applications of automatic data processing, used in business accounting primarily during the 1940s and 1950s. The first accounting machines were nonelectronic and used punched cards and wires arranged in plugboard panels. **2.** A computer in which an accounting software package

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* chat¹ (definition 1).

AFP *n.* Acronym for **AppleTalk Filing Protocol**. 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 **Andrew File System**. 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 **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 Mbps. *See also* PCI local bus.

AH *n.* **Authentication Header**. 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 **America Online Instant Messenger**. 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 **Advanced Interactive Executive**. A version of the UNIX operating system developed and maintained by IBM for its UNIX workstations and PCs.

B

and 0s. To ease translation, programmers and others who habitually work with the computer's internal processing abilities use hexadecimal (base-16) or octal (base-8) numbers. See Appendix E. *See also* base (definition 2), binary-coded decimal, binary number, bit, Boolean algebra, byte, cyclic binary code, digital computer, dyadic, logic circuit. *Compare* ASCII, decimal, hexadecimal, octal.

binary² *n.* In an FTP client program, the command that instructs the FTP server to send or receive files as binary data. *See also* FTP client, FTP server. *Compare* ascii.

binary chop *n.* *See* binary search.

binary-coded decimal *n.* A system for encoding decimal numbers in binary form to avoid rounding and conversion errors. In binary-coded decimal coding, each digit of a decimal number is coded separately as a binary numeral. Each of the decimal digits 0 through 9 is coded in 4 bits, and for ease of reading, each group of 4 bits is separated by a space. This format is also called 8-4-2-1, after the weights of the four bit positions, and uses the following codes: 0000 = 0; 0001 = 1; 0010 = 2; 0011 = 3; 0100 = 4; 0101 = 5; 0110 = 6; 0111 = 7; 1000 = 8; 1001 = 9. Thus, the decimal number 12 is 0001 0010 in binary-coded decimal notation. *Acronym:* BCD. *See also* base (definition 2), binary¹, binary number, decimal, EBCDIC, packed decimal, round.

binary compatibility *n.* Portability of executable programs (binary files) from one platform, or flavor of operating system, to another. *See also* flavor, portable (definition 1).

binary conversion *n.* The conversion of a number to or from the binary number system. *See* Appendix E. *See also* binary¹.

binary device *n.* Any device that processes information as a series of on/off or high/low electrical states. *See also* binary¹.

binary digit *n.* Either of the two digits in the binary number system, 0 and 1. *See also* bit.

binary file *n.* A file consisting of a sequence of 8-bit data or executable code, as distinguished from files consisting of human-readable ASCII text. Binary files are usually in a form readable only by a program, often compressed or

structured in a way that is easy for a particular program to read. *Compare* ASCII file.

binary file transfer *n.* Transfer of a file containing arbitrary bytes or words, as opposed to a text file containing only printable characters (for example, ASCII characters with codes 10, 13, and 32–126). On modern operating systems a text file is simply a binary file that happens to contain only printable characters, but some older systems distinguish the two file types, requiring programs to handle them differently. *Acronym:* BFT.

binary format *n.* Any format that structures data in 8-bit form. Binary format is generally used to represent object code (program instructions translated into a machine-readable form) or data in a transmission stream. *See also* binary file.

binary notation *n.* Representation of numbers using the binary digits, 0 and 1. *Compare* floating-point notation.

binary number *n.* A number expressed in binary form, or base 2. Binary numbers are composed of zeros and ones. *See* Appendix E. *See also* binary¹.

binary search *n.* A type of search algorithm that seeks an item, with a known name, in an ordered list by first comparing the sought item to the item at the middle of the list's order. The search then divides the list in two, determines in which half of the order the item should be, and repeats this process until the sought item is found. *Also called:* binary chop, dichotomizing search. *See also* search algorithm. *Compare* hash search, linear search.

binary synchronous protocol *n.* *See* BISYNC.

binary transfer *n.* The preferred mode of electronic exchange for executable files, application data files, and encrypted files. *Compare* ASCII transfer.

binary tree *n.* In programming, a specific type of tree data structure in which each node has at most two subtrees, one left and one right. Binary trees are often used for sorting information; each node of the binary search tree contains a key, with values less than that key added to one subtree and values greater than that key added to the other. *See* the illustration. *See also* binary search, tree.

gally from a computer system or use computer resources. However, the goal of the majority is only to break into the system. *See also* hacker (definition 2).

cradle *n.* A receptacle used to recharge the batteries in some handheld or palm-size PCs or PDAs (personal digital assistants). Some cradles also serve as a means to connect these smaller devices with a desktop PC. Not all of these devices require a cradle to recharge or connect to a desktop system. *Also called:* dock, docking station.

cramfs *n.* Short for **Compressed Read-Only File System** and **cram** a filesystem onto a small ROM. A filesystem feature available with Linux version 2.4 systems. Cramfs are used in handheld Linux devices to compress and write applications to ROM or Flash memory.

crash¹ *n.* The failure of either a program or a disk drive. A program crash results in the loss of all unsaved data and can leave the operating system unstable enough to require restarting the computer. A disk drive crash, sometimes called a disk crash, leaves the drive inoperable and can cause loss of data. *See also* abend, head crash.

crash² *vb.* **1.** For a system or program, to fail to function correctly, resulting in the suspension of operation. *See also* abend. **2.** For a magnetic head, to hit a recording medium, with possible damage to one or both.

crash recovery *n.* The ability of a computer to resume operation after a disastrous failure, such as the failure of a hard drive. Ideally, recovery can occur without any loss of data, although usually some, if not all, data is lost. *See also* crash¹.

crawl *vb.* To compile and organize entries for a search engine by reading Web pages and related information. Crawling is typically performed by programs called "spiders."

crawler *n.* *See* spider, Web browser.

Cray-1 *n.* An early supercomputer developed in 1976 by Seymour Cray. Extremely powerful in its day, the 64-bit Cray-1 ran at 75 MHz and was capable of executing 160 million floating-point operations per second. *See also* supercomputer.

CRC *n.* Acronym for **cyclical** (or **cyclic**) **redundancy check**. A procedure used in checking for errors in data transmission. CRC error checking uses a complex calculation to generate a number based on the data transmitted. The sending device performs the calculation before transmission and includes it in the packet that it sends to the

receiving device. The receiving device repeats the same calculation after transmission. If both devices obtain the same result, it is assumed that the transmission was error free. The procedure is known as a redundancy check because each transmission includes not only data but extra (redundant) error-checking values. Communications protocols such as XMODEM and Kermit use cyclical redundancy checking.

create method *n.* In Java programming, a method defined in the home interface and invoked by a client to create an enterprise java bean. *See also* enterprise java bean, method.

creator *n.* On the Apple Macintosh, the program that creates a file. Files are linked to their creators by creator codes; this link enables the operating system to open the creator application when a document file is opened.

credentials *n.* A set of information that includes identification and proof of identification that is used to gain access to local and network resources. Examples of credentials are user names and passwords, smart cards, and certificates.

creeping featurism *n.* The process by which features are added to a new version of a program by software developers until the program becomes unduly cumbersome and difficult to use. Generally, creeping featurism occurs as developers attempt to enhance the competitiveness of the program with each new release by adding new features.

crippled version *n.* A scaled-down or functionally reduced version of hardware or software, distributed for demonstration purposes. *See also* demo.

critical error *n.* An error that suspends processing until the condition can be corrected either by software or by user intervention (for example, an attempt to read to a nonexistent disk, an out-of-paper condition on the printer, or a checksum fault in a data message).

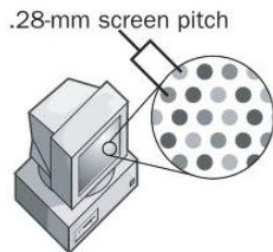
critical-error handler *n.* A software routine that attempts to correct or achieve a graceful exit from a critical or threatening error. *See also* critical error, graceful exit.

critical path method *n.* A means of evaluating and managing a large project by isolating tasks, milestone events, and schedules and by showing interrelationships among them. The critical path for which this method is named is a line connecting crucial events, any of which, if delayed, affects subsequent events and, ultimately, completion of the project. *Acronym:* CPM.

screen name *n.* A name under which an America Online user is known. The screen name may be the same as the user's real name. *See also* America Online.

screen phone *n.* A type of Internet appliance combining a telephone with an LCD display screen, a digital fax modem, and a computer keyboard, with ports for a mouse, printer, and other peripheral devices. Screen phones can be used as regular telephones for voice communications and can also be used as terminals to gain access to the Internet and other online services.

screen pitch *n.* A measurement of a computer monitor's screen density, representing the distance between phosphors on the display. The lower the number, the more detail can be displayed clearly. For example, a .28-dot-pitch screen has better resolution than one with .32. *See the illustration. See also* phosphor.



Screen pitch.

screen saver *n.* A utility that causes a monitor to blank out or display a certain image after a specified amount of time passes without the keyboard being touched or the mouse being moved. Touching a key or moving the mouse deactivates the screen saver. Screen savers were originally used to prevent images from becoming permanently etched on a monitor's screen. Although modern monitors are not susceptible to this problem, screen savers remain popular for their decorative and entertainment value. *See the illustration.*



Screen saver.

screen shot *n.* An image that shows all or part of a computer display.

ScreenTips *n.* Notes that appear on the screen to provide information about a toolbar button, tracked change, or comment or to display a footnote or an endnote. ScreenTips also display the text that will appear if you choose to insert a date or AutoText entry.

script *n.* A program consisting of a set of instructions to an application or a utility program. The instructions usually use the rules and syntax of the application or utility. On the World Wide Web, scripts are commonly used to customize or add interactivity to Web pages. *See also* macro.

scripting language *n.* A simple programming language designed to perform special or limited tasks, sometimes associated with a particular application or function. An example of a scripting language is Perl. *See also* Perl, script.

script kiddie *n.* A would-be hacker who does not have the technical skills or knowledge needed for traditional hacking methods; one who relies on easy-to-use kiddie scripts. *See also* hacker, kiddie script.

scriptlet *n.* A reusable Web page based on the features of Dynamic HTML (DHTML) that can be created with HTML text and a scripting language and then inserted as a control in another Web page or in an application. Developed by Microsoft and introduced in Internet Explorer version 4, scriptlets are implemented as .htm files that give developers a relatively easy, object-based means of creating components that reflect the Web metaphor and that can be used to add interactivity and functionality—for example, animation, color changes, pop-up menus, or drag-and-drop capability—to Web pages without requiring repeated trips to the server. *Also called:* Microsoft Scripting Component. *See also* dynamic HTML. *Compare* applet.

scroll *vb.* To move a document or other data in a window in order to view a particular portion of the document. Scrolling may be controlled by the mouse, arrow keys, or other keys on the keyboard. *See also* scroll bar.

scroll arrow *n.* *See* scroll bar.

scroll bar *n.* In some graphical user interfaces, a vertical or horizontal bar at the side or bottom of a display area that can be used with a mouse for moving around in that area. Scroll bars often have four active areas: two scroll arrows for moving line by line, a sliding scroll box for moving to an arbitrary location in the display area, and gray areas for moving in increments of one window at a time.

scroll box *n.* *See* elevator.

S