Designed for Microsoft® Windows NT® Windows®98

CD-ROM Included

Microsoft® Internet Explorer

THE ULTIMATE COMPUTER REFERENCE

Microsoft® Press

Over 8,000 Entries
with online updates available quarterly

# Microsoft® Computer Dictionary

## Fourth Edition

- *Three new appendixes, including Y2K, file extensions, and Internet domains*
- *Searchable text on CD-ROM*
- *Extensive coverage of hardware, software, the Internet, and more!*
- *Detailed illustrations and diagrams for easy reference*

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



Library of Congress Cataloging-in-Publication Data
Microsoft Computer Dictionary. -- 4th ed.
p. cm.
Previous eds. published under title: Microsoft Press computer dictionary
ISBN 0-7356-0615-3
1. Computers Dictionaries. 2. Microcomputers Dictionaries.
I. Microsoft Press computer dictionary.
QA76.15.M538 1999
004'.03--dc21 99-20168
CIP

Printed and bound in the United States of America.

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

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

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

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 mspress.microsoft.com.



**Acquisitions Editor:** Christey Bahn
**Project Editor:** Kim Fryer

A

**Association Control Service Element** *n.* An Open Systems Interconnection (OSI) method to establish a call between two applications by checking the identities and contexts of the application entities and performing an authentication security check. *Acronym:* ACSE. *See also* ISO/OSI reference model.

**Association for Computing Machinery** *n.* A membership society founded in 1947 and devoted to the advancement of knowledge and technical proficiency of information processing professionals. *Acronym:* ACM.

**Association of C and C++ Users** *n.* An organization of people interested in the programming language C and its variants. Members of the association include professional programmers, manufacturers and vendors of compilers, and nonprofessional programming enthusiasts. *Acronym:* ACCU.

**associative storage** *n.* A memory-based storage method in which data items are accessed not on the basis of a fixed address or location but by analysis of their content. *Also called* content-addressed storage.

**associativity** *n. See* operator associativity.

**asterisk** *n. See* *.

**asymmetrical transmission** *n.* A form of transmission used by high-speed modems, typically those that operate at rates of 9,600 bps or more, that allows simultaneous incoming and outgoing transmission by dividing a telephone line bandwidth into two channels: one in the range of 300 to 450 bps and one at a speed of 9,600 bps or more.

**asymmetric digital subscriber line** *n. See* ADSL.

**asymmetric digital subscriber loop** *n. See* ADSL.

**asymmetric modem** *n.* A modem that transmits data to the telephone network and receives data from the network at different speeds. Most commonly, an asymmetric modem will have a maximum download speed substantially higher than its upload speed. *See also* modem.

**asynchronous** *adj.* Pertaining to, being, or characteristic of something that is not dependent on timing. For example, asynchronous communications can start and stop at any time instead of having to match the timing governed by a clock.

**asynchronous communications** *n.* Computer-to-computer communications in which the sending and receiving computers do not rely on timing as a means of determining where transmissions begin and end. *Compare* synchronous communications.

**asynchronous device** *n.* A device whose internal operations are not synchronized with the timing of any other part of the system.

**asynchronous operation** *n.* An operation that proceeds independently of any timing mechanism, such as a clock. For example, two modems communicating asynchronously rely upon each sending the other start and stop signals in order to pace the exchange of information. *Compare* synchronous operation.

**asynchronous procedure call** *n.* A function call that executes separately from an executing program when a set of enabling conditions exist. After the conditions have been met, the operating system's kernel issues a software interrupt and directs the executing program to execute the call. *Acronym:* APC. *See also* function call.

**Asynchronous Protocol Specification** *n.* The X.445 standard. *See* CCITT X series.

**asynchronous static RAM** *n.* A type of static RAM (SRAM) that is not synchronized with the system clock. Like static RAM in general, asynchronous static RAM, or async SRAM, is used in a computer's L2 cache—the special portion of memory used for storing frequently accessed information. Because this type of static RAM is not synchronized with the clock, the CPU must wait for data requested from the L2 cache. Asynchronous static RAM is faster than main memory, but not as fast as synchronous burst static RAM or pipeline burst static RAM. *Also called* async SRAM. *See also* L2 cache, static RAM. *Compare* dynamic RAM, pipeline burst static RAM, synchronous burst static RAM.

**Asynchronous Transfer Mode** *n. See* ATM (definition 1).

**asynchronous transmission** *n.* In modem communication, a form of data transmission in which data is sent intermittently, one character at a time, rather than in a steady stream with characters separated by fixed time intervals. Asynchronous transmission relies on the use of a start bit and stop bit(s), in addition to the bits representing the character (and an optional parity bit), to distinguish separate characters. See the illustration.

**async SRAM** /ā´sēnk S-ram´/ *n. See* asynchronous static RAM.

allow the user 60 seconds to log in after making a connection. If the user fails to enter a valid login name and password within this time, the computer breaks the connection, thus protecting itself against crackers as well as freeing a phone line that may have gone dead.

**timer** *n.* A register (high-speed memory circuit) or a special circuit, chip, or software routine used to measure time intervals. A timer is not the same as the system clock, although its pulses can be derived from the system clock frequency. *See also* time and date. *Compare* clock (definition 1), clock/calendar.

**time-sharing** or **timesharing** *n.* **1.** The use of a computer system by more than one individual at the same time. Time-sharing runs separate programs concurrently by interleaving portions of processing time allotted to each program (user). *See also* quantum (definition 2), time slice. **2.** A method, used primarily in the 1960s and 1970s, for sharing the capabilities (and cost) of a computer, such as a mainframe. Timesharing allowed different clients to "rent" time on a large computer and pay for only the portion of time they used.

**time slice** *n.* A brief period of time during which a particular task is given control of the microprocessor in a time-sharing multitasking environment. *See also* multitasking, preemptive multitasking. *Compare* quantum (definition 2).

**time-slice multitasking** *n. See* preemptive multitasking.

**Time to Live** *n.* A header field for a packet sent over the Internet indicating how long the packet should be held. *Acronym:* TTL. *See also* header (definition 2), packet (definition 1).

**timing signals** *n.* **1.** Any of several types of signals used to coordinate activities within a computer system. **2.** A signal used to coordinate data transfer operations.

**tiny model** *n.* A memory model in the Intel 80x86 processor family. The tiny model allows a combined total of only 64 kilobytes (KB) for code and for data. *See also* 8086, memory model.

**title bar** *n.* In a graphical user interface, a horizontal space at the top of a window that contains the name of the window. Most title bars also contain boxes or buttons for closing and resizing the window. Clicking on the title bar allows the user to move the entire window.

**TLA** *n.* Acronym for three-letter acronym. An ironic term, usually used in jest on the Internet in e-mail, newsgroups, and other online forums, referring to the large number of acronyms in computer terminology, particularly those consisting of three letters.

**TMS34010** *n. See* 34010, 34020.

**TN display** *n. See* twisted nematic display.

**TOF** *n. See* top-of-file.

**toggle[1]** *n.* An electronic device with two states or a program option that can be turned on or off using the same action, such as a mouse click.

**toggle[2]** *vb.* To switch back and forth between two states. For example, the Num Lock key on an IBM-style keyboard toggles the numeric keypad between numbers and cursor movement.

**ToggleKeys** *n.* A feature of Windows 9x and Windows NT 4 that sounds high and low beeps when one of the toggle keys (Caps Lock, Num Lock, or Scroll Lock) is turned on or off. *See also* typematic. *Compare* BounceKeys, FilterKeys, MouseKeys, ShowSounds, SoundSentry, StickyKeys, ToggleKeys.

**token** *n.* **1.** A unique structured data object or message that circulates continuously among the nodes of a token ring and describes the current state of the network. Before any node can send a message, it must first wait to control the token. *See also* token bus network, token passing, token ring network. **2.** Any nonreducible textual element in data that is being parsed—for example, the use in a program of a variable name, a reserved word, or an operator. Storing tokens as short codes shortens program files and speeds execution. *See also* Basic, parse.

**token bus** *n.* The IEEE 802.4 specification for token-passing networks based on a bus or tree topology. Token bus networks were designed primarily for manufacturing but the specification also corresponds to the ARCnet architecture used for LANs.

**token bus network** *n.* A LAN (local area network) formed in a bus topology (stations connected to a single, shared data highway) that uses token passing as a means of regulating traffic on the line. On a token bus network, a token governing the right to transmit is passed from one station to another, and each station holds the token for a brief time, during which it alone can transmit information. The token is transferred in order of priority from an "upstream" station to the next "downstream" station, which might or

T