

Designed for

Microsoft®
Windows NT®
Windows 98


CD-ROM
Included

Microsoft®

Internet
Explorer

THE ULTIMATE COMPUTER REFERENCE

Microsoft®

Over
8,000
Entries
with online updates
available quarterly

Microsoft® Computer Dictionary

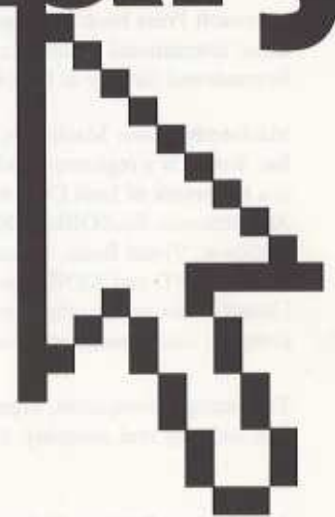
Fourth Edition

- *Three new appendixes, 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*



Microsoft®

Microsoft®
**Computer
Dictionary**
Fourth
Edition



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

Copyright © 1999 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. -- 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.

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

Distributed in Canada by Penguin Books 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.

Macintosh, Power Macintosh, QuickTime, and TrueType fonts are registered trademarks of Apple Computer, Inc. Kodak is a registered trademark of the Eastman Kodak Company. Intel is a registered trademark and Indeo is a trademark of Intel Corporation. Active Desktop, Active Directory, ActiveMovie, Active Platform, ActiveX, Authenticode, BackOffice, DirectInput, DirectX, Microsoft, Microsoft Press, MS-DOS, MSN, NetMeeting, NetShow, Visual Basic, Visual C++, Visual J++, WebTV, WebTV Network, Win32, Win32s, Windows, Windows NT, and XENIX are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries. PANTONE is a registered trademark of Pantone, Inc. Other product and company names mentioned herein may be the trademarks of their respective owners.

The example companies, organizations, products, people, and events depicted herein are fictitious. No association with any real company, organization, product, person, or event is intended or should be inferred.

Acquisitions Editor: Christey Bahn
Project Editor: Kim Fryer

symbolic address *n.* A memory address that can be referred to in a program by name rather than by number.

symbolic coding *n.* The expression of an algorithm in words, decimal numbers, and symbols rather than in binary numbers, so that a person can read and understand it. Symbolic coding is used in high-level programming languages. *See also* algorithm, high-level language.

symbolic language *n.* A computer language that uses symbols such as keywords, variables, and operators to form instructions. All computer languages except machine language are symbolic.

symbolic link *n.* A disk directory entry that takes the place of a directory entry for a file but is actually a reference to a file in a different directory. *Also called* alias, shortcut, soft link, symlink.

symbolic logic *n.* A representation of the laws of reasoning, so named because symbols rather than natural-language expressions are used to state propositions and relationships. *See also* logic.

symbol set *n.* Any collection of symbols legitimized by a data-coding system, such as extended ASCII, or a programming language.

symbol table *n.* A list of all identifiers encountered when a program is compiled (or assembled), their locations in the program, and their attributes, such as variable, routine, and so on. *See also* compile, identifier, linker, module (definition 1), object code.

symlink \sim'lēnk\ *n.* *See* symbolic link.

symmetric digital subscriber line *n.* *See* SDSL.

symmetric multiprocessing *n.* *See* SMP.

symmetric multiprocessing server *n.* *See* SMP server.

SYN *n.* Short for **synchronous idle character**. A character used in synchronous (timed) communications that enables the sending and receiving devices to maintain the same timing. *Also called* sync character.

sync character *n.* *See* SYN.

syncDRAM \senk'dram\ *n.* *See* SDRAM.

synchronization *n.* **1.** In networking, a communications transmission in which multibyte packets of data are sent and received at a fixed rate. *See also* packet (definition 1). **2.** In networking, the matching of timing between computers on the network. All of the computers are generally assigned identical times to facilitate and coordinate communications. **3.** In a

computer, the matching of timing between components of the computer so that all are coordinated. For instance, operations performed by the operating system are generally synchronized with the signals of the machine's internal clock. *See also* clock (definition 1), operating system. **4.** In application or database files, version comparisons of copies of the files to ensure they contain the same data. **5.** In multimedia, precise real-time processing. Audio and video are transmitted over a network in synchronization so that they can be played back together without delayed responses. *See also* real-time.

synchronization signal *n.* *See* sync signal.

synchronize *vb.* To cause to occur at the same time.

Synchronized Multimedia Integration Language *n.* *See* SMIL.

synchronous *adj.* Occurring at the same time. In computer transmissions, a reference to activity governed by a clock or by synchronized timing.

synchronous burst static RAM *n.* A type of static RAM that is synchronized with the system clock. Synchronous burst static RAM is used in a computer's L2 cache, where frequently accessed information is stored for fast retrieval by the CPU. Synchronous burst static RAM is faster than asynchronous static RAM but is limited to a maximum bus speed of 66 MHz. Computers running at faster speeds can use another form of cache memory known as pipeline burst static RAM. *Also called* sync SRAM. *See also* L2 cache, static RAM. *Compare* asynchronous static RAM, dynamic RAM, pipeline burst static RAM.

synchronous communications *n.* Computer-to-computer communications in which transmissions are synchronized by timing between the sending and receiving machines.

Synchronous Data Link Control *n.* *See* SDLC.

Synchronous Digital Hierarchy *n.* An ITU recommendation implemented in Europe and similar in most respects to the SONET standard used in North America and Japan. *See also* SONET.

synchronous DRAM \sen'krə-nəs D'ram\ *n.* *See* SDRAM.

synchronous graphics RAM *n.* A form of dynamic RAM optimized for the high-speed, high-volume data transfers required by 3D graphics, video, and other memory-intensive applications. Used primarily on video accelerator cards, synchronous graphics

RAM makes use of burst features such as block write in retrieving and writing. *Acronym:* SGRAM. *See also* burst.

synchronous idle character

synchronous operation control of a clock or timing asynchronous operation bus operation, data transfer pulses either embedded or provided simultaneously.

Synchronous Optical Network

synchronous protocol developed to standardize systems between computers, usually stream transmission of data. Examples include the synchronous (BISYNC) High-level Data Link Control, Synchronous Data Link Control, BISYNC, HDLC, SDLC.

synchronous transmission information is transmitted in separated by equal time intervals. Synchronous transmission.

synchronous UART receiver/transmitter synchronous serial transmission receiver share a timing.

sync signal \senk sig'nal. The part of a signal that denotes the end of a transmission (signal) and the end of a sync signal).

sync SRAM \senk S'ram. Synchronous static RAM.

SYN flood \sin'fləd. A host computer on a network by sending the host computer (synchronization) packets not responding to the host. A SYN flood is a denial of service attack. *See also* Denial of Service, Ping of Death.

synonym *n.* **1.** A word that has the same or other word. When used in an example, the verb

RAM makes use of burst operations and includes features such as block writes that increase efficiency in retrieving and writing graphics data to the screen. *Acronym: SGRAM. See also block, mask.*

synchronous idle character *n.* See SYN.

synchronous operation *n.* 1. Any procedure under the control of a clock or timing mechanism. *Compare asynchronous operation.* 2. In communications and bus operation, data transfer accompanied by clock pulses either embedded in the data stream or provided simultaneously on a separate line.

Synchronous Optical Network *n.* See SONET.

synchronous protocol *n.* A set of guidelines developed to standardize synchronous communications between computers, usually based on either bit stream transmission or recognized character codes. Examples include the character-oriented binary synchronous (BISYNC) protocol and the bit-oriented High-level Data Link Control (HDLC) and Synchronous Data Link Control (SDLC) protocols. *See also BISYNC, HDLC, SDLC.*

synchronous transmission *n.* Data transfer in which information is transmitted in blocks (frames) of bits separated by equal time intervals. *Compare asynchronous transmission.*

synchronous UART *n.* A universal asynchronous receiver/transmitter (UART) that supports synchronous serial transmission, where the sender and receiver share a timing signal. *See also UART.*

sync signal \sɛnk sig'nəl\ *n.* Short for **synchronization signal**. The part of a raster-display video signal that denotes the end of each scan line (the horizontal sync signal) and the end of the last scan line (the vertical sync signal).

sync SRAM \sɛnk S'ram\ *n.* See synchronous burst static RAM.

SYN flood \sin' fləd'n. A method of overwhelming a host computer on a network, especially the Internet, by sending the host a high volume of SYN (synchronization) packets requesting a connection, but never responding to the acknowledgement packets returned by the host. A SYN flood is a form of denial of service attack. *See also denial of service attack. Compare Ping of Death.*

synonym *n.* 1. A word that is an equivalent of another word. When used in reference to data input, for example, the verbs *type* and *keyboard* are synonyms.

2. In hashing, one of two distinct keys that produce the same hash address. *See also hash².*

syntax *n.* The grammar of a language; the rules governing the structure and content of statements. *See also logic, programming language, syntax error. Compare semantics (definition 1).*

syntax checker *n.* A program for identifying errors in syntax for a programming language. *See also syntax, syntax error.*

syntax error *n.* An error resulting from a statement that violates one or more of the grammatical rules of a language and is thus not "legal." *See also logic, semantics (definition 1), syntax.*

synthesis *n.* The combining of separate elements to form a coherent whole, or the result of such a combining (for example, combining digital pulses to replicate a sound, or combining digitized words to synthesize human speech). *See also speech synthesis.*

synthesizer *n.* A computer peripheral, chip, or stand-alone system that generates sound from digital instructions rather than through manipulation of physical equipment or recorded sound. *See also MIDI.*

.sys *n.* A file extension for system configuration files.

sysadmin *n.* The usual logon name or e-mail address for the system administrator of a UNIX-based system. *See also system administrator.*

sysgen \sis'jen\ *n.* See system generation.

sysop \sis'op\ *n.* Short for **system operator**. The overseer of a BBS or a small multiuser computer system.

Sys Req key *n.* Short for **System Request key**. A key on some IBM and compatible keyboards that is intended to provide the same function as the Sys Req key on an IBM mainframe computer terminal: to reset the keyboard or to change from one session to another.

system *n.* Any collection of component elements that work together to perform a task. Examples are a hardware system consisting of a microprocessor, its allied chips and circuitry, input and output devices, and peripheral devices; an operating system consisting of a set of programs and data files; or a database management system used to process specific kinds of information.

system administrator *n.* The person responsible for administering use of a multiuser computer system, communications system, or both. A system administrator performs such duties as assigning user accounts