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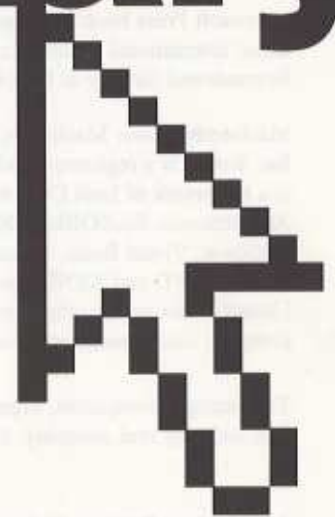Microsoft

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Fourth Edition

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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 w in retrieving and writing *Acronym:* SGRAM. *See*

synchronous idle charac

synchronous operation control of a clock or tin asynchronous operation bus operation, data tran pulses either embedded vided simultaneously c

Synchronous Optical N

synchronous protocol oped to standardize sy between computers, us stream transmission o Examples include the chronous (BISYNC) High-level Data Link nous Data Link Contr BISYNC, HDLC, SD

synchronous transmis information is transm separated by equal ti chronous transmissio

synchronous UART receiver/transmitter nous serial transmiss ceiver share a timing

sync signal \sēnk sig signal. The part of a denotes the end of o signal) and the end sync signal).

sync SRAM \sēnk S static RAM.

SYN flood \sin´ flo host computer on a by sending the hos nization) packets n responding to the by the host. A SY vice attack. *See a pare* Ping of Deat

synonym *n.* **1.** A other word. Whe example, the ver

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 \sēnk sig`nəl\ *n.* Short for **sync**hronization **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 \sēnk 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* hash[2].

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 op**erator. 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