



Microsoft

Computer Dictionary

Fifth Edition

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surface-mount technology *n.* A method of manufacturing printed circuit boards in which chips are fixed directly to the surface of the board instead of being soldered into holes predrilled to hold them. Its advantages are compactness, resistance to vibration, and the capacity for dense interconnections on both sides of the board. *Acronym:* SMT. *Compare* DIP, leadless chip carrier, pin grid array.

surge *n.* A sudden—and possibly damaging—increase in line voltage. *See also* surge protector, voltage regulator. *Compare* power failure, spike.

surge protector *n.* A device that prevents surges from reaching a computer or other kinds of electronic equipment. *Also called:* surge suppressor. *See also* surge, transient suppressor.

surge suppressor *n.* *See* surge protector.

suspend *vb.* To halt a process temporarily. *See also* sleep².

Suspend command *n.* A power management feature of Windows 9x and Windows NT 4 and later for portable computers. Clicking on the Suspend command in the Start menu allows the user to temporarily suspend operations of the machine (enter “Suspend mode”) without turning the power off, saving battery power without having to restart applications or reload data.

suspend mode *n.* *See* sleep mode.

sustained transfer rate *n.* A measure of the speed at which data can be transferred to a storage device such as a disk or a tape. The sustained transfer rate is the data transfer speed that can be kept up by the device for an extended period of time.

SVC *n.* Acronym for switched virtual circuit. A logical connection between two nodes on a packet-switching network that is established only when data is to be transmitted. *See also* node (definition 1), packet switching. *Compare* PVC.

SVG *n.* Acronym for Scalable Vector Graphics. An XML-based language for device-independent description of two-dimensional graphics. SVG images maintain their appearance when printed or when viewed with different screen sizes and resolutions. SVG is a recommendation of the World Wide Web Consortium (W3C).

SVGA *n.* Acronym for Super Video Graphics Array. A video standard established by the Video Electronics Standards Association (VESA) in 1989 to provide high-resolution color display on IBM-compatible computers.

Although SVGA is a standard, compatibility problems can occur with the video BIOS. *See also* BIOS, video adapter.

S-video connector *n.* A hardware interface for video devices that handles chrominance (color) and luminance (black and white) separately. An S-video connector is capable of providing a sharper image than those achieved with systems using RCA-type, or composite, connectors.

S/WAN *n.* *See* secure wide area network.

swap *vb.* **1.** To exchange one item for another, as in swapping floppy disks in and out of a single drive. **2.** To move segments of programs or data between memory and disk storage. *See also* virtual memory.

swap file *n.* A hidden file on the hard drive that Windows uses to hold parts of programs and data files that do not fit in memory. The operating system moves data from the swap file to memory as needed and moves data out of memory to the swap file to make room for new data. The swap file is a form of virtual memory. *See also* memory, virtual memory.

swap-on-the-fly *n.* In Linux, a process which allows swap space to be added as needed. Swap-on-the-fly allows a swap file to be created at any time on any available disk, and active only until the system is shut down.

swapping *n.* **1.** A technique for enabling an operating system, and therefore a computer, to address—roughly, have available—more memory than is physically present in the system. Swapping in this sense (as opposed to swapping disks in and out of a drive, for example) involves moving blocks of information in units known as pages between memory and disk as they are needed during the execution of the application. Swapping is supported by operating systems such as Windows NT and later, Windows 9x and later, OS/2, and Linux. **2.** A technique for moving entire processes in and out of main memory. **3.** In programming, the process of exchanging two values—for example, exchanging values between two variables. *See also* page (definition 2), swap, swap file, virtual memory.

swap space *n.* *See* swap file.

swarm intelligence *n.* An emerging subfield of artificial intelligence that relies on the collective knowledge of relatively simple particles or agents. Based loosely on the principles of social insect colonies, it seeks to apply the collective intelligence of fragmented agents or groups. It emphasizes distributedness, direct or indirect interactions, flexibility, and robustness. Successful appli-

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