

Computer Desktop Encyclopedia

Ninth Edition

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soft patch A quick fix to machine language currently in memory that only lasts for the current session.

soft return A code inserted by word processing software into a text document to mark the end of the line. When the document is printed, the soft return is converted into the end-of-line code required by the printer. Soft returns are determined by the right margin and change when the margins are changed. Soft returns were always a format option determined by the programmer. In most graphics-based environments today, soft returns are not used. Contrast with *hard return*.

soft sectored A common method of identifying sectors on a disk by initially recording sector information on every track with a format program. Contrast with *hard sectored*.

Softstrip An earlier bar code and scanner system from Cauzin that used a unique encoding pattern of from 50 to 600 bytes of data per inch.

softswitch A programmable network switch that can process the signaling for all types of packet protocols. Also known as a "media gateway controller," "call agent" or "call server," such devices are used by carriers that support converged communications services by integrating SS7 telephone signaling with packet networks. Using network processors at its core, softswitches can support IP, DSL, ATM and frame relay in the same unit.

The International Softswitch Consortium says a softswitch should be able to (1) control connection services for a media gateway and/or native IP endpoints, (2) select processes that can be applied to a call, (3) provide routing for a call within the network based on signaling and customer database information, (4) transfer control of the call to another network element, and (5) interface to and support management functions such as provisioning, fault, billing, etc. For more information, visit www.softswitch.org.

The switching technology in a softswitch is in software (hence its name) rather than in the hardware as with traditional switching center technology. This software programmability allows it to support existing and future IP telephony protocols (H.323, SIP, MEGACO, etc.). See *IP telephony*. See also *Soft-Switch*.

software Instructions for the computer. A series of instructions that performs a particular task is called a "program." The two major categories of software are "system software" and "application software." System software is made up of control programs such as the operating system and database management system (DBMS). Application software is any program that processes data for the user (inventory, payroll, spreadsheet, word processor, etc.). See *system software* and *application software*.

A common misconception is that software is data. It is not. Software tells the hardware how to process the data.

Software is "run."

Data is "processed."

software administration The ongoing management of software applications in an enterprise, which includes the distribution of new software and upgrading of existing software. Improving software administration is one of the main reasons for the creation of the network computer (NC) and NetPC.

software architecture The design of application or system software that incorporates protocols and interfaces for interacting with other programs and for future flexibility and expandability. A self-contained, stand-alone program would have program logic, but not a software architecture.

software bug A problem that causes a program to abend (crash) or produce invalid output. Problems that cause a program to abend are invalid data, such as trying to divide by zero, or invalid instructions, which are caused by bad logic that misdirects the computer to the wrong place in the program.

A program with erroneous logic may produce bad output without crashing, which is the reason extensive testing is required for new programs. For example, if the program is supposed to add an amount, but instead, it subtracts it, bad output results. As long as the program performs valid machine instructions on data it knows how to deal with, the computer will run.

software bus A programming interface that allows software modules to transfer data to each other. Although "bus" is traditionally a hardware term for an interconnecting pathway, it is occasionally used in this manner when the focus is on internally transferring large amounts of data from one process to another. See *bus*.

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