

A Dictionary of
Computing

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1

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sequence may be taken from left to right, or it may be in alternate directions for alternate lines thus avoiding an unproductive carriage-return movement. All serial printers have an arrangement in which a print head moves parallel to the paper and along the line to be printed. The print may be formed by impacting an inked ribbon against the paper, as in the case of *dot matrix printers, or by one of the non-impact marking technologies such as *inkjet or *thermal printers. In some designs the productivity is increased when printing other than complete lines by arranging for the head to move at high speed when passing blank areas. The direction in which the line is to be printed is also optimized. Note that the term serial printer refers to the method of printing and not to the connection, which may be serial or parallel.

serial process A *process in which stages in the process are executed in a strictly serial manner, one stage completing before the next starts, and with only one stage active at any one instant.

serial programming See SINGLE THREADING.

serial transfer Transmission of information as sequential units. For example, if two computers connected by a single wire wish to communicate an 8-bit unit of information, the sending computer would transmit each of the eight bits in sequence over the wire, while the receiving computer would reassemble the sequential bits into the original 8-bit units. Compare PARALLEL TRANSFER.

S **serpentine recording** A method of recording on magnetic tape (usually in cartridge form) where each track is recorded separately and alternate tracks are recorded in opposite directions, so that it is not necessary to rewind the tape after recording each track.

server A system on a network that provides a service to other systems connected to the network. The term was originally restricted to the case where both the server and the systems it served were on the same local area network, and where the server was likely to be expensive in comparison with the systems it served. The term is now used much more gener-

ally, applying to systems where the server and the system to which it provides a service (the client) may be linked by a metropolitan area network or wide area network, and where the server may be much less costly than the client. See also CLIENT/SERVER, FILE SERVER, COMPUTE SERVER.

service bit A bit in an *X25 *packet that indicates whether the packet is formatted to contain primarily data or control information.

service engineering Any maintenance, *preventive or *remedial.

service level agreement (SLA) An agreement between the supplier of a service and the users of that service that sets out the levels of service that will be offered, preferably in quantitative terms, and the obligations on the user of the service. A typical agreement for a computing service or network service will set out the expected levels of service measured in terms of one or more of the following: availability, fault reporting, recovery from breakdowns, traffic levels, throughput, response times, training and advisory services, and similar measures of the service quality as seen by the end-user. The agreement will also set out user costs and charges, the provision of access to premises for service contractors, and standards of training to be achieved by users. The agreement may form part of a legal contract, yet is equally likely to be found within a single large organization where one unit within the organization offers services to other units, but where a legally enforceable contract would not be appropriate.

session A recording on a CD (CD-R or CD-RW) that is made at one particular time. Generally, multisession recording is possible; i.e. files can be copied in one session and then, more files copied in a later session, etc.

session layer of network protocol function. See SEVEN-LAYER REFERENCE MODEL.

set 1. A collection of distinct objects of any sort. The objects in the set are called its *members* or *elements*. An element can occur at most once in a set and order or arrangement is unimportant. If x is a