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COMPUTER DICTIONARY

SECOND EDITION



THE COMPREHENSIVE
STANDARD FOR
BUSINESS, SCHOOL,
LIBRARY, AND HOME



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References to transistors often mention bipolar transistors and field-effect transistors. In the former, the three terminals are called the base, emitter, and collector; in the latter, the terminals are known as the gate, source, and drain. *See also* FET.

transistor-transistor logic Abbreviated TTL. A type of bipolar circuit design that utilizes transistors connected to each other either directly or through resistors. TTL offers high speed and good noise immunity and is used in many digital circuits. A large number of TTL gates can be fabricated on a single integrated circuit.

translate In programming, to convert a program from one language to another—for example, to convert the source code of a program written in the C language to object code that represents the same instructions or a close approximation in machine language. Translation is performed by special programs such as compilers, assemblers, and interpreters.

In computer graphics, to move an image in the “space” represented on the display, but without turning (rotating) the image.

translator A program that translates one language or data format into another. Compilers, assemblers, and macro processors can all be thought of as translators.

transmission The sending of information over a communications line or a circuit. Computer transmissions can take place in any of a number of ways, as outlined below:

- asynchronous (variable timing) or synchronous (exact timing)
- serial (essentially, bit by bit) or parallel (byte by byte; a group of bits at once)
- duplex or full-duplex (simultaneous two-way communication), half-duplex (two-way communication in one direction at a time), or simplex (one-way communication only)
- burst (intermittent transmission of blocks of information)

transmission channel *See* channel.

Transmit Data *See* TXD.

transmitter Any circuit or electronic device designed to send electrically encoded data to another location.

transparent In computer use, an adjective describing a device, function, or part of a program that works so smoothly and easily that it is invisible to the user. For example, the ability of one application to use files created by another is transparent if the user encounters no difficulty in opening, reading, or using the second program's files or doesn't even know the use is occurring.

In communications, an adjective describing a mode of transmission in which data can include any characters, including device-control characters, without the possibility of misinterpretation by the receiving station—for example, early termination because the data contains a character that the receiving device interprets as “end of transmission.” Communications protocols allow for two methods of achieving transparency: character (byte) stuffing and bit stuffing. An extra byte or bit is added to any data that could be misinterpreted as a control character; for example, a 0 (zero) might be inserted after five consecutive 1's of data because six 1's in a row can appear only at the beginning or end of a transmission. The receiving station removes the extra bytes or bits to return the data to its original condition.

transponder A transceiver in a communications satellite that receives a signal from an earth station and retransmits it on a different frequency to one or more other earth stations.

transportable computer *See* portable computer.

Transport Control Protocol/Interface Program *See* TCP/IP.

transport layer The fourth of the seven layers in the International Organization for Standardization's Open Systems Interconnection (OSI) model for standardizing computer-to-computer communications. The transport layer is one level above the network layer and is responsible for both quality of service and accurate delivery of information. Among the tasks performed on this layer are error detection and correction. It is the highest of the three layers (data-link, network,