

NEWTON'S TELECOM DICTIONARY

12th Edition

The Official Dictionary of Telecommunications
The Internet, Computer Telephony, Voice Processing
Windows 95 and NT Networking
Data Communications, Carrier Telephony
The Intelligent Network
LAN, WAN and Wireless Communications

by Harry Newton



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ISBN 1-57820-008-3

February, 1997

Manufactured in the United States of America

Twelfth Edition
Cover design by Mara Seinfeld
Printed at Command Web, New Jersey

Transceiver 1. Any device that transmits and receives. In sending and receiving information, it often provides data packet collision detection as well.

2. In IEEE 802.3 networks, the attachment hardware connecting the controller interface to the transmission cable. The transceiver contains the carrier-sense logic, the transmit/receive logic, and the collision-detect logic.

3. A device to connect workstations to standard thick Ethernet-style (IEEE 802.3).

Transceiver Cable In local area networks, a cable that connects a network device such as a computer to a physical medium such as an Ethernet network. A transceiver cable is also called drop cable because it runs from a network node to a transceiver (a transmit / receiver) attached to the trunk cable. See TRANSCEIVER.

Transcoder A device that combines two 1.544 megabit per second bit streams into a single 1.544 megabit per second bit stream to enable transmission of 44 or 48 voice conversations over a DS-1 medium.

Transcriptionist A person who listens to a tape recording and types the words he hears. The word, transcriptionist, derives from the verb to transcribe. The most common employment of transcribers is in the medical industry, where busy doctors talk into tape recorders telling good and bad news of their patients. And even busier transcriptionists type those words into the patient's medical records, or whatever.

Transducer A device which converts one form of energy into another. The diaphragm in the telephone receiver and the carbon microphone in the transmitter are transducers. They change variations in sound pressure (your voice) to variations in electricity, and vice versa. Another transducer is the interface between a computer, which produces electron-based signals, and a fiber-optic transmission medium, which handles photon-based signals.

Transfer A telephone system feature which provides the ability to move a call from one extension to another. It is probably the most commonly used and misused feature on a PBX. Before you buy a PBX, check out how easy it is to transfer a call. If you have a single line phone, you should simply hit the touch hook, hear a dial tone and then dial the chosen extension number and hang up. This sounds easy in principle, but many people find it difficult since they associate the touch hook with hanging up the phone. Some companies have gotten around this by putting a "hook flash" button on the phone itself. Such a button is like having an autodial button which just makes the exact short tone you make when you quickly hit the hook flash button. An even better solution is an electronic phone with a button specially marked "transfer," or a button next to a screen which lights up "transfer." Failing to efficiently transfer a call is the easiest way to give your customers the wrong impression of your firm. Think of how many times have you called a company only to be told it wasn't the fellow's job and he will transfer the call, but "If we get cut off, please call Joe back on extension 2358." There are typically four types of Transfer: Transfer using Hold, Transfer using Conference, and Transfer with and without Announcement.

Transfer Callback After a specified number of rings, an unanswered transferred call will return to the telephone which originally made the transfer.

Transfer Delay A characteristic of system performance that expresses the time delay in processing information through a data transmission system.

Transfer Mode A fundamental element of a communications protocol, transfer mode refers to the functioning arrangement between transmitting and receiving devices across a network. There are two basic transfer modes: connection-oriented and connectionless. Connection-oriented network protocols require that a call be set up before the data transmission begins, and that the call subsequently be torn down. Further, all data are considered to be part of a data stream. Examples of connection-oriented protocols include analog circuit-switched voice and data, ISDN, X.25 and ATM.

Connectionless protocols, on the other hand, do not depend on such a process. Rather, the transmitting device gains access to the transmission medium and begins to transmit data address to the receiver, without setting up a logical connection across the physical network. LANs (e.g. Ethernet and Token Ring) make use of connectionless protocols, as does SMDS, which actually is an extension of the LAN concept across a MAN (Metropolitan Area Network). For more detail, see CONNECTION ORIENTED and CONNECTIONLESS MODE TRANSMISSION.

Transfer Protocols Protocols are all of the "packaging" that surround actual user data to tell the network devices where to send the data, who it comes from, and how to tell if it arrived. Transfer protocols are designed for the efficient moving of larger chunks of user data.

Transfer Rate The speed of data transfer — in bits, bytes or characters per second — between devices.

Transformer An electrical device used to reduce or increase the voltage in a circuit or to transfer energy from one circuit to another. One reason for using a transformer is that commercial power is typically 120 or 240 volts while many phone systems (and other computer-type "things") work best on 48, 24 or lower voltage.

Transhybrid Loss The transmission loss between opposite ports of a hybrid network, that is between the two ports of the four-wire connection.

Transient Any high-speed, short duration increase or decrease impairment that is superimposed on a circuit. Transients can interrupt or halt data exchange on a network. See HIT.

Transient Mobile Unit A mobile unit communicating through a foreign base station.

Transit Delay 1. In ISDN, the elapsed time between the moment that the first bit of a unit of data (such as a frame) passes a given point and the moment that bit passes another given point plus the transmission time of that data unit.

2. As an ATM term, it is the time difference between the instant at which the first bit of a PDU crosses one designated boundary and the instant at which the last bit of the same PDU crosses a second designated boundary.

Transit Exchange The European equivalent of a tandem exchange.

Transit Timing A method of eliminating looping between nodes used in the network layer of some packet-switched systems. This method is used in the Internet Protocol (IP) portion of Transmission Control Protocol/Internet Protocol (TCP/IP).

Transition Probabilities Probabilities of moving from one state to another.

Transition Zone The zone between the far end of the near-field region and the near end of the far-field region. The transition is gradual.