

NEWTON'S TELECOM DICTIONARY

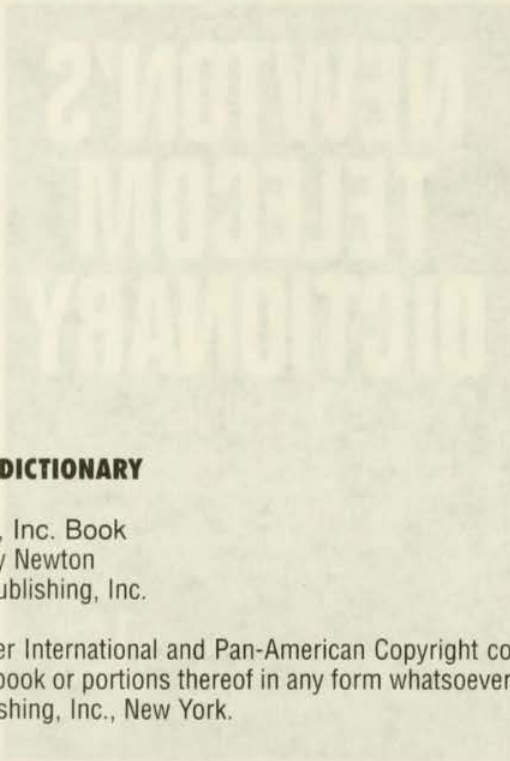
12th Edition

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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similar specification in the header area. - SUMMARY AREA. Only segments containing total or control information may occur in this area (e.g., invoice total, etc.)

Data Service Unit DSU. Device designed to connect a DTE (Data Terminal Equipment like a PC or a LAN) to a digital phone line to allow fully-digital communications. A DSU is sort of the digital equivalent of a modem. In more technical terms, a DSU is a type of short haul, synchronous data line driver, normally installed at a user location that connects a user's synchronous equipment over a 4-wire circuit to a serving dial-central-office. This service can be for a point-to-point or multipoint operation in a digital data network. DSUs are typically used for leased lines. For switched digital services, you need a CSU/DSU also called a DSU/CSU. See CSU/DSU and DSU/CSU.

Data Set In AT&T jargon, a data set is a modem, i.e. a device which performs the modulation/demodulation and control functions necessary to provide compatibility between business machines which work in digital (on-off) signals and voice telephone lines. In IBM jargon however, a data set is a collection of data, usually in a file on a disk. See also MODEM.

Data Set Ready One of the control signals on a standard RS-232-C connector. It indicates whether the data communications equipment is connected and ready to start handshaking control signals so that transmission can start. See RS-232-C and the Appendix.

Data Sheets What Business Communications Review calls its statistical and descriptive material comparing PBXs. BCR includes these data sheets in its excellent BCR Manual of PBXs. This manual is the most extensive write-up of larger (more than 200 line) PBXs in the world. It is available from Telecom Library on 1-800-LIBRARY.

Data Signaling Rate The total of the number of bits per second in the transmission path of a data transmission system. A measurement of how quickly data is transmitted, expressed in bps, bits-per-second.

Data Sink Part of a terminal in which data is received from a data link.

Data Source The originating device in a data communications link.

Data Steward A new role of data caretaker emerging in business units. Individual takes responsibilities for the data content and quality.

Data Stream 1. Collection of characters and data bits transmitted through a channel.

2. An SCSA term. A continuous flow of call processing data.

Data Surfer A person who makes a living doing online research and information retrieval. Also known as a Cybrarian (comes from cyberspace librarian) or a super searcher. See CYBRARIAN.

Data Switching Exchange DSE. The equipment installed at a single location to perform switching functions such as circuit switching, message switching, and packet switching.

Data Synchronization The process of keeping database data timely and relevant by sending and receiving information between laptops, between desktops in the field and between bigger computers at headquarters. See also SYNCHRONIZATION and REPLICATION.

Data Terminal Equipment DTE. A definition of hardware specifications that provides for data communications. There are two basic specs your hardware can conform to, DTE (Data Terminal Equipment) or DCE (Data Communications Equipment). See DCE and DTE.

Data Terminal Ready One of the control signals on a standard RS-232-C connector. It indicates if the data terminal equipment is present, connected and ready and has had handshaking signals verified. See RS-232-C and the Appendix.

Data Transfer Rate The average number of bits, characters, or blocks per unit time passing in a data transmission system.

Data Transfer Request Signal A call control signal transmitted by a DCE to a DTE to indicate that a distant DTE wants to exchange data.

Data Transfer Time The time that elapses between the initial offering of a unit of user data to a network by transmitting data terminal equipment and the complete delivery of that unit to receiving data terminal equipment.

Data Typing When converting a database from one format to another, several conversion programs will convert the data to a common format before converting it to the final version. During the conversion process a program may check through the data in the database to determine what it is and arbitrarily make one field numeric, one field character, one field memo, etc.

Data Warehouse A database warehouse consolidates information from many departments within a company. This data can either be accessed quickly by users or put on an OLAP server for more thorough analysis. Data warehouses often use OLAP servers. OLAP stands for On Line Analytical Processing, also called a multidimensional database. According to PC Week, these databases can slice and dice reams of data to produce meaningful results that go far beyond what can be produced using the traditional two-dimensional query and report tools that work with most relational databases. OLAP data servers are best suited to work with data warehouses. See DATA WAREHOUSING.

Data Warehousing A software strategy in which data are extracted from large transactional databases and other sources and stored in smaller databases, making analysis of the data somewhat easier. See DATA WAREHOUSE.

Database A collection of data structured and organized in a disciplined fashion so that access is possible quickly to information of interest. There are many ways of organizing databases. Most corporate databases are not one single, huge file. They are multiple databases related to each other by some common thread, e.g. an employee identification number. Databases are made up of two elements, a record and a field. A record is one complete entry in a database, e.g. Gerry Friesen, 12 West 21 Street, New York, NY 10010, 212-691-8215. A field would be the street address field, namely 12 West 21 Street.

Databases are stored on computers in different ways. Some are comma delineated. They differentiate between their fields with commas — like Gerry's record above. A more common way of storing databases is with fixed length records. Here, all the fields and all the records are of the same length. The computer finds fields by index and by counting. For example, Gerry's first name might occupy the first 15 characters. Gerry's last name might be the next 20 characters, etc. Where Gerry's names are too short to fill the full 15 or 20 characters, their fields are "padded" with specially-chosen characters which the computer recognizes as padded characters to be ignored. The most important thing to remember about databases is that all the common database programs, like dBASE,

NEWTON'S TELECOM DICTIONARY

forms of Store and Forward message switching.

Stored Procedures Compiled code on a database server that reduces the processing burden on clients.

Stored Program Computer A computer controlled by internally stored instructions, that can synthesize and store instructions, and that can subsequently execute those instructions. See also STORED PROGRAM CONTROL.

Stored Program Control SPC. The routing of a phone call through a switching matrix is handled by a program stored in a computer-like device, which may well be a special-purpose computer. Before SPC switches came along, the rotary dialing of the phone caused the elements of the switch to directly "step" through their dialing path. This was slow and cumbersome, since dialing can be slow. Also subscribers can abort half way (they made a mistake) and this can mess up the switch's efficiency. Thus the move to stored program control switches was very significant. These days virtually all switches are stored program control. Nothing happens in the switching matrix until the stored program control receives all the dialing digits and decides what to do with them.

Stovepiping In a call center, agents typically need access to many databases. In the past they've used dumb terminals. They log into one computer, get into one database, go further into it. When they need information out of another database, they've typically had to climb out of the previous database, the previous computer, log into another and climb down into it. This is called stovepiping, because it follows the contours of a stovepipe. These days, agents have intelligent computers as terminals. They can access several databases at once, by simply having different windows open on their screen or having a front end program that populates a screen with information from several databases, most likely using a GUI interface.

STP 1. Shielded Twisted Pair. Twisted pair (TP) wiring with a metal foil sheath around it to limit interference.

2. Signal Transfer Point. The packet switch in the nation's emerging Common Channel Interoffice Signaling (CCIS) system. The CCIS is a packet switched network operating at 4800 bits per second. CCIS replaces both SF (Single Frequency) and MF (Multi-frequency) by converting dialed digits to data messages. It will run at 56,000 bps with the introduction of Signaling System 7. See SIGNALING SYSTEM 7. For a full explanation of the Advanced Intelligent Network, see AIN.

Straight-Through When wiring up phone and some data extensions, there are basically two ways of doing it — straight-through and crossover. Straight-through occurs when you wire both ends identically so the signals pass straight through. This is typically done with patch panels and modular EIA adapters. Crossover wiring has a reverse order of wiring. As an example, let's take a four conductor, RJ-11. In a crossover wiring (e.g. an RJ-11 phone extension cord), conductor 1 would be connected to hole 1 on one plug and one 4 on the other end. Conductor 2 would be connected to 4. And 3 would be connected to hole 2.

Straight-Tip Connector ST Connector. An optical fiber connector used to join single fibers together at interconnects or to connect them to optical cross connects.

Straightforward Outward Completion Operator can place an outgoing call for phone user. Also called "Through Supervision."

Strand A single uninsulated wire.

Strand Lay The distance of advance of one strand of a spirally stranded conductor, in one turn, measured axially.

Stranded Conductor A conductor composed of groups of wires twisted together.

Stranded Copper A type of electrical wire conductor comprised of multiple copper wires twisted together forming a single conductor and then covered with an insulating jacket.

Stranded Fiber Cable A fiber cable in which individual optical fibers are twisted around strength members. Both campus and building versions are used. The campus version, unlike the one for buildings, is environmentally protected for outside use.

Strap A permanent, wired connection between two more points.

Stray Current Current through a path other than the intended path. See also SPURIOUS EMISSION.

Strawman This concept is widely used in selling. The simple idea is to set up a Buyer's Checklist and tell your prospective customer that this Checklist is objective. Any product that meets all the criteria is worth buying. Of course, there's only one product that meets all the criteria. It's yours.

Stream An SCSI term. One of 16 physical data lines making up the SCbus or SCxbus Data Bus.

Streamer Streaming tape drive.

Streaming An Internet term. A Web page typically consists of text and graphics images. To receive the text typically takes much less time than receiving the graphics images. One of the features which Netscape's improved browser introduced was the streaming of graphical image. This allowed the user to look at a new page of text on screen as the graphics streamed in (came in over the phone lines). See INTERNET and HOME PAGE.

Streaming Media After Netscape defined the concept more narrowly — see Streaming — Bill Gates of Microsoft defined more broadly to video coming to you in packets over the Internet. The stream is so fast that the packets become full-blown 30 frames per second video, similar to commercial, over-the-air TV.

Streaming Tape Backup A device to back up files and programs. A streaming tape backup looks very much like a large audio cassette. It records data sequentially.

Streaming Tape Drive A magnetic tape unit especially designed to make a nonstop dump or restore magnetic disks without stopping at interblock gaps.

Streams An architecture introduced with Unix System V, Release 3.2 that provides for flexible and layered communication path between processes (programs) and device drivers. Many companies market applications and devices that can integrate through Streams protocols.

Street Price The real or typical selling price of computers, hardware, and software. Most laptop and desktop computers sell for about 25 percent below list price. Software may be discounted even more.

Street Talk The Banyan-developed protocol for discovering and maintaining resource information distributed among the servers connected to Banyan's VINES network operating system. Also known as a global naming service.

Streetsweeper A heavy duty shotgun with a revolving round magazine typically holding 18 12-gauge or 20-gauge shotgun shells. This word crept into a story the Wall Street Journal ran on cellular fraud. When the Feds rang a cellular phone store as a