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Expanded &
Updated Edition

Newton's
Telecom
Dictionary

by
**Harry
Newton**

**The Official Dictionary of
Computer Telephony, Telecommunications,
Networking, Data Communications,
Voice Processing and the Internet**

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NEWTON'S TELECOM DICTIONARY

electron beam to the front of the tube. The inside front of the tube has been coated with fluorescent material which reacts to and lights up once the electron beams hit. CRTs are very reliable if they are vented, since the electron gun gets hot. CRTs have a "memory." They will memorize what's been left on their screen for a while, i.e. the image is burned into the screen. And you'll see it even though the screen is turned off. In short, turn your screen off when you're not using it. Or run a "CRT-saving" program which varies the image on the screen.

CATI Computer Assisted Telephone Interviewing, a market research term for a call center based on the use of a computerized database.

CATLAS AT&T software standing for Centralized Automatic Trouble Locating and Analysis System. CATLAS is used as a maintenance tool for locating and diagnosing problems in AT&T electronic central offices.

CATV Community Antenna TeleVision or CAble TeleVision. CATV is a broadband transmission facility. It generally uses a 75-ohm coaxial cable which simultaneously carries many frequency-divided TV channels. Each channel is separated by guard channels. See ADDRESSABLE PROGRAMMING and BROADBAND.

CAU 1. Northern Telecom term for Connection Arrangement Unit. 2. Controlled Access Unit. Intelligent Token-Ring hub.

CAVITY A volume defined by conductor-dielectric or dielectric-dielectric reflective boundaries, or a combination of both, and having dimensions designed to produce specific interference effects (constructive or destructive) when excited by an electromagnetic wave.

CB Why 10-4, good buddy, that stands for Citizens Band. Also known as Children's Band, not because of Radio Shack's toy walkie talkies, but for the inane chatter that sometimes goes on in these channels. In short, CB is low-power (up to four WATTS permitted) public radio. You do not need permission from the FCC to transmit or receive at these frequencies. Thus CB's great popularity. CB went through a boom (perhaps a craze?), then it ran out of radio frequencies and public enthusiasm. Its original frequencies were 26.965 to 27.225 Mhz. Now the FCC's given it new frequencies — 462.55 to 469.95 MHz. These new frequencies are much better, clearer and less congested. If you buy a CB set, make sure you get one that operates in these higher frequencies. In some countries they use different frequencies. CB radio is not allowed in many countries, even some civilized countries, though it will obviously work there.

CBDS Connectionless Broadband Data Service. The European version of SMDS. A draft standard written by ETSI as a recommendation to ITU-T.

CBEMA Computer Business Equipment Manufacturers Association. A lobbying group created to protect the interests of its members.

CBF Computer Based Fax.

CBK Change Back.

CBR Constant Bit Rate. It refers to processes such as voice that require a constant, repetitive or uniform transfer of information.

CBTA Canadian Business telecommunications Alliance. The largest organization of business telecom users in Canada.

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tion is always placed in the same position. And specific bit patterns used for control differ dramatically from those used in representing data, so that errors are less likely to occur. SDLC and ADCCP are similar protocols. See also HIGH LEVEL DATA LINK CONTROL.

HDMAC Another potential high definition TV standard. HDMAC was spawned by Britain's Independent Broadcasting Authority. Unlike Japan's Hi-Vision, HDMAC has the attraction of being compatible with existing TV sets, i.e. those in Europe.

HDSL High bit rate Digital Subscriber Line. A technology to put two-way T-1 on a normal unshielded, bridged (but not loaded) twisted pair (the stuff common in local loops) without using repeaters. See also ADSL.

HDT Host Digital Terminal.

HDTP Hoofddirectie Telecommunicatie en Post (Directorate for Telecommunications and Posts, The Netherlands).

HDTV High Definition TeleVision. Today's typical TV set in North America contains 336,000 pixels. A high definition TV set — one giving at least the definition of a movie theater, or 35 mm slide — will require at least two million pixels. Researchers are pursuing at least two dozen technologies to achieve this level of quality. The ideal HDTV would be flat screen, cheap, reliable and require very little electrical power. One standard, recommending the doubling of the current 525 lines per picture to 1050 lines and increasing the screen aspect ratio (width:height) from the current 12:9 to 16:9, which would create a television screen shaped more like a movie screen. See HIGH DEFINITION TELEVISION.

HD Half Duplex circuit.

HDX Half DupleX.

HE See HEAD END.

HEAD A device that reads, writes, or erases data on a storage medium. The device which comes in contact with or comes very close to the magnetic storage device (disk, diskette, drum, tape) and reads and/or writes to the medium. In computer devices, it performs the same function as the head on a home cassette tape recorder.

HEAD END 1. The originating point of a signal in cable TV systems. At the head-end, you'll often find large tall TV and dish satellite receiving antennae. 2. A central control device required within some LAN/MAN systems to provide such centralized functions as remodulation, re-timing, message accountability, contention control, diagnostic control, and access.

HEAD THRASHING A term for rapid back and forth movements of the disk head of a hard drive.

HEADER The portion of a message that contains information that will guide the message to the correct destination. This information contains such things as the sender's and receiver's addresses, precedence level, routing instructions, and synchronization pulses.

HEADER ERROR CONTROL A CRC code located in a data cell which is used for checking the integrity of the transmission.

HEADSET A telephone transmitter and receiver assembly worn on the head.

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LNRU Like New Repair and Update. A term in the industry which repairs telecom equipment. It means all equipment is repaired and updated to the current manufacturer's specifications. New plastic is used to refurbish to a "like new" status. Also added are a new coil cord, line cord and address tray. Included is a full diagnostic test with a burn-in (if required) and an operational system test. Definition courtesy Nitsuko America. See also REPAIR AND QUICK CLEAN and REPAIR, UPDATE AND REFURBISH.

LOA Letter Of Agency. A letter that you give to someone whom you allow to represent you and act on your behalf. For example, a letter of agency is used when your interconnect company orders lines from your local phone company on your behalf.

LOAD 1. The act of taking a program or data from external storage — a cassette, a floppy or hard disk, etc. and storing it in the computer's main RAM memory. 2. The load is any electric or electronic appliance or gadget plugged into an AC electrical outlet. It completes the circuit from the transformer through the hot conductor, to the load, through the neutral conductor and back to the utility transformer. See AC, AC POWER, GROUND and GROUNDING.

LOAD BALANCING The practice of splitting communication into two (or more) routes. By balancing the traffic on each route, communication is made faster and more reliable. In telephone systems, you can change phone and trunk terminations in order to even out traffic on the network. An example: You have a PBX of three separate cabinets, each of which are joined by tie lines. Instead of having each cabinet serve anyone in the building, you might figure which groups talk to each other the most and concentrate them into specific cabinets. The objective is to maximize the number of calls that can be handled inside each cabinet and reduce the number of calls that need to travel between the cabinets. This makes the calls go faster and reduces the need for inter-cabinet lines.

In data internetworking, bridges and routers perform load balancing by splitting LAN-to-LAN traffic among two or more WAN links. This allows for the combination of several lower speed lines to transmit higher speed LAN data simultaneously. In local area networking, load balancing is a function performed by token ring routers.

In disk arrays, load balancing means using multiple power supplies within a disk array so that power usage is spread equally across all the power supplies. The failure of one supply will not cause the entire array to fail.

LOAD COIL An inductor used to increase the inductance of a pair of metal wires in a local loop. The use of the inductor improves the voice transmission characteristics of the loop, but it must be removed if you are running digital signaling (e.g. T-1) over the line. See LOADING and LOADING COIL.

LOAD LEVELING Distributing traffic over more than one route.

LOAD NUMBER Load number is the Canadian equivalent of the U.S. concept of Ringer Equivalence. The idea is that each phone or "phone thing" you buy (e.g. answering machine) comes with a number. You add the numbers together and if you get above a certain number, you are drawing too much current and none of the bells on the phones will ring. In Canada, single line phones are typically rated at 10 for the newer ones with electronic "bells" or 20 for the older electro-mechanical ones with real metal bells. In Canada, the rule is not more than 100 points on a line. In the U.S., phones are typically one and the rule is not more than five points on a line.

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