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NEWTON'S TELECOM DICTIONARY

**The Official Dictionary
of Telecommunications
Networking and
the Internet**

**16th
EXPANDED
& UPDATED
EDITION**

BY HARRY NEWTON

Security First Innovations, LLC, Exhibit 2015

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P22 Format An enchanted version of the P2 format that appeared in the 1988 X.400 standard.

P2T Pulse to Tone & Rotary Dial Recognition products.

P35 Format The EDI (Electronic Data Interchange) message header enhancement to X.400 that enables EDI-specific addressing, routing and handling of EDI messaging. Defined in 1990 in the X.435 standard.

P802.11 P802.11 is a series of evolving standards in the wireless Local Area Network arena. The IEEE Program P802.11 Standards Working Group aims to define universal protocols for wireless LANs in the 900 MHz, 2.4 GHz and infrared frequency bands. Main components in the 802.11 standard are twofold: 1. The physical specifications for medium-dependent protocols. There are different physical specifications for each frequency band supported in 802.11. 2. The Medium Access Control (MAC) specifications for ad-hoc wireless networks and wireless network infrastructures. A single medium-independent MAC protocol provides a unified network interface between different wireless PHYs (Physical Specifications) and wired networks.

PA Public Address. Loud speaker system, sometimes used for paging.

PABX Private Automatic Branch eXchange. Originally, PBX was the word for a switch inside a private business (as against one serving the public). PBX means a Private Branch Exchange. Such a "PBX" was typically a manual device, requiring operator assistance to complete a call. Then the PBX went "modern" (i.e. automatic) and no operator was needed any longer to complete outgoing calls. You could dial "9." Thus it became a "PABX." Now all PABXs are modern. And a PABX is now commonly referred to as a "PBX."

PAC Personal Activity Center. A combination IBM PC clone, alarm clock, answering machine, speakerphone, fax machine, modem, compact-disk player and AM/FM radio all rolled into one unit sitting on your desk.

Pac Bell Pacific Bell, the California Bell Operating Company (BOC) which, along with Nevada Bell, formed Pacific Telesis (PacTel). PacTel was one of the seven original Regional Bell Operating Companies (RBOCs) formed in 1984 by the Modified Final Judgement (MFJ). As PacTel was acquired by SBC Corporation (Southwestern Bell) in 1996, Pac Bell is now a subsidiary of SBC.

Pacific Telesis One of the seven, now-independent Regional Holding Companies formed at the Divestiture of AT&T of 1983. It holds Pacific Bell, Nevada Bell and several non-regulated subsidiaries. In 1996, SBC Corporation bought Pacific Telesis.

Pacing Controlled rate of flow dictated by the receiving component, to prevent congestion. A method of flow control in IBM's SNA. See Pacing Group.

Pacing Algorithm The mathematical rules established to control the rate at which calls are placed by an automatic dialing machine, also called a predictive dialer. See Predictive Dialer.

Pacing Control SNA term for flow control. See Pacing Group.

Pacing Group In IBM's SNA, the number of data units (Path Information Units, or PIUs) that can be sent before a response is received. An IBM term for window.

Pack To compress data items so they take up less space. A process used by many database programs to remove records marked for deletion.

Packet 1. Generic term for a bundle of data, usually in binary form, organized in a specific way for transmission. The specific native protocol of the data network may term the packet as

Generic Format of a Data Packet STX=Start of Text EXT=End of Text

Header	S T X	Text	E T X	Trailer

a packet, block, frame or cell. A packet consists of the data to be transmitted and certain control information. The three principal elements of a packet include: 1. Header — control information such as synchronizing bits, address of the destination or target device, address of originating device, length of packet, etc. 2. Text or payload — the data to be transmitted. The payload may be fixed in length (e.g., X.25 packets and ATM cells), or variable in length (e.g., Ethernet and Frame Relay frames). 3. Trailer — end of packet, and error detection and correction bits. See also Block, Cell and Frame.

2. Specific packaging of data in a packet-switched network, such as X.25, Frame Relay or ATM. A true packet-switched network such as X.25 involves packets of a specific and fixed length. In a public packet switched network, such packet payloads originally were specified as being either 128B or 256B, where B=Byte. In later versions of the standards, that packet size was increased to a maximum of 4,096B, although the packet payload size generally does not exceed either 512B or 1024B. The larger packet size traditionally is used in airline reservation systems and other applications where relatively large sets of data routinely are transmitted. A X.25 packet prepends the payload with header information including a flag of eight bits; the flag denotes the beginning of the packet and also serves to assist the network nodes (packet switches) in synchronizing on the rate of transmission. An address field of eight bits also prepends the payload, with four bits identifying the target device and four bits identifying the transmitting device. Control data of eight-to-sixteen bits comprise the last element of the header; included in control data is the packet number in order that the network nodes might identify and correct for lost or errored packets. Appending the payload is a trailer consisting of a Cyclic Redundancy Check (CRC), which is used by all packet nodes for purposes of error detection and correction. See ATM, CRC, Frame Relay, Packet Assembler/Disassembler (PAD), X.25.

Packet Assembler/Disassembler PAD. A hardware/software combination that forms the interface between a X.25 network such as PDN and an asynchronous device such as a PC. The PAD generates call request, call clear, and other information packets in addition to the ones that contain user data. The PAD is responsible for packetizing the data from the transmitting device before it is forwarded through the packet network. On the receiving end of the transmission, the PAD strips away the control information contained in the header and trailer in order to get at the original text or payload, in effect disassembling the packets and reconstituting the original set of data in its native or original form. The PAD may be in the form of a standalone DCE device on the customer premise and supporting one or more terminals, or in the form of a printed circuit board which fits into an expansion slot of the terminal. Smaller users generally rely on the carrier to provide the PAD, which is embedded in the packet switch.

Packet Buffer Memory set aside for storing a packet awaiting transmission or for storing a received packet. The memory may be located in the network interface controller or in the