

# NEWTON'S TELECOM DICTIONARY

**The Official Dictionary of  
Telecommunications & the Internet**

IP Telephony • LANs & Intranets • Call Centers & Computer Telephony  
Fiber Optics, SONET and DWDM • Satellites  
Voice, Data, Image & Video Networking • Wired  
and Wireless Telecom • VoIP • T-1, T-3, T-4, E-1,  
3 • ISDN & ADSL • Cable Modems • Cellular,  
CS & GSM • Windows 95, 98, NT, NetWare,  
Apple, Sun & Unix Networking • Ecommerce



Ex. 1009  
YMax Corporation  
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So things are changing, albeit very very slowly.

**Switched Loop** In telephony, a circuit that automatically releases connection from a console or switchboard, once connection has been made, to the appropriate terminal. Loop buttons or jacks are used to answer incoming listed directory number calls, dial "O" internal calls, transfer requests, and intercepted calls. The attendant can handle only one call at a time.

**Switched Loop Operation** Each call requiring attendant assistance is automatically switched to one of several switched loops on an attendant position.

**Switched Multibeam** A type of "smart antennae" used in Wireless Local Loop (WLL) systems. Switched multibeam antennae detect signal strength in a given connection, and select a beam between an end device and one of perhaps many WLL antennae, locking in on the strongest signal. Also in the general category of "smart antennae" systems is the phased array approach. See also PHASED ARRAY and WLL.

**Switched Multimegabit Data Service** SMDS. A 1.544 Mbps public data service with an IEEE 802.6 standard user interface. It can support Ethernet, Token Ring and FDDI (OC-3c) LAN-to-LAN connections. See SMDS and SMDS Interest Group.

**Switched Network** See PSTN.

**Switched Private Line Network** A network which results from combining point-to-point circuits with switches.

**Switched Service Network** A private line network that uses scan and/or CCSA type common control switching.

**Switched Transport** A name for telephone traffic between the local exchange carriers' Central Offices and an interexchange carrier's point of presence (POP). Switched transport is generally provided on a monopoly basis as part of a LEC's network.

**Switched Virtual Circuit** SVC. A call which is only established for the duration of a session and is then disconnected. See SVC.

**Switcher** Also called a production switcher. A video term. A device that allows transitions between different video pictures. May also contain special effects generators.

**Switchhook** A synonym for hookswitch or hook switch. Also spelled switch hook. See SWITCH HOOK.

**Switching** Connecting the calling party to the called party. This may involve one or many physical switches.

**Switching Arrangement** A circuit component which enables a Customer to establish a communications path between two phones on a network.

**Switching Centers** There are four levels in the North American switching hierarchy run at AT&T. They are: Class 1 — Regional Center, Class 2 — Sectional Center, Class 3 — Primary Center, Class 4c — Toll Center and Class 4P — Toll Point. In addition, the local Bell operating companies run a fifth level in the hierarchy, called the Class 5 — End Office.

**Switching Equipment** Premises equipment which performs the functions of establishing and releasing connections on a per call basis between two or more circuits, services or communications systems.

**Switching Equipment Capacity** A telephone company term. The capacity of switching equipment is expressed in network access lines. These components can be grouped into four categories. For D&F Chart purposes, the four categories are: 1. Dial Tone Equipment; 2. Talking Channels; 3. Switching Control; and 4. Trunk Terminations.

**Switching Fee** A one-time, per-line fee imposed by the LEC to reprogram their switching system to change your default long-distance carrier. Some resellers and IXCs will reimburse new subscribers for this fee.

**Switching Hub** A multiport hub that delivers the full, uncontested bandwidth between any pair of ports. An intelligent switching hub also provides bridging and multiprotocol routing capabilities.

**Switching Point** Same as end office and intermediate office.

**Switching System** 1. An assembly of equipment arranged for establishing connections between lines, lines to trunks, or trunks to trunks.

2. An ATM term. A set of one or more systems that act together and appear as a single switch for the purposes of PNNI routing.

**Switchless Resellers** A switchless reseller buys long distance service in bulk from a long distance company, such as AT&T, and resells that service to smaller users. It typically gets its monthly bill on magnetic tape, then rebills the bulk service to its customers. A switchless reseller owns no communications facilities — switches or transmission. It has two "assets" — a computer program to rebill the tape and some sales skills to sell its services to end users. The profit it makes comes from the difference between what it pays the long distance company and what it is able to sell its services at. Switchless resellers are also called rebillers. It's not an easy business to be in, since you are selling a long distance company's services to compete against itself. See also AGGREGATOR.

**SXS** Step by Step switching system. An automatic dial-telephone system in which calls go through the switching equipment by a succession of switches that move a step at a time, from stage to stage, each step being made in response to the dialing of a number.

**Symbol** 1. An abbreviated, predetermined representation of any relationship, association or convention.

2. In digital transmission, a recognizable electrical state which is associated with a signal element, which is an electrical signal within a defined period of time. In a binary transmission, for example, a signal element is represented as one of two possible states or symbols, i.e., 1 or 0.

An abbreviated, predetermined representation of any relationship, association or convention.

**Symbolic Debugger** A debugger is a wholly- or partly-memory-resident program that lets you closely monitor and control execution of an application under development. At the most basic level, a debugger lets you look at running machine code, and fiddle around with the contents of memory — great if you understand machine code (and are looking at machine code you've written from scratch). Not great if you don't know machine code, or are looking at machine code output by a high-level language compiler (e.g., C++ compiler). A basic symbolic debugger references the symbol table of an executable, providing readable variable names, function entry-points, etc., more or less as they appear in source. Easier for machine-language folks (because of the labels). Not much easier for high-level language folks, because you're still dealing with machine code. A source-level symbolic debugger references both the symbol table of an executable and various files produced during compilation; and lets you work with high-level language source directly, during target program execution. Fully-integrated debuggers like this are built into Microsoft's Visual/X products. Functions common to most debuggers include the ability to set "breakpoints" (i.e., run the program until you reach this step, then stop) **Watch** "ables" (i.e., show me how the value of this variable changes — and possibly stop if it assumes a predetermined value) **Max** "single-step execution" (i.e., do this step and stop), **change** variable values in mid-execution, etc.