TELECOM DICTIONARY

The Official Dictionary of Telecommunications Networking and the Internet

16th EXPANDED & UPDATED EDITION

BY HARRY NEWTON

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base, provides supplemental information
ating the caller, determining if hazardous
ed at the subject, and so on. In some
ıry PSAP may dispatch aid. In most cases,
onferenced or transferred to a secondary
elp will be dispatched. Secondary PSAPs
fire dispatch areas, municipal police force
ɔulance dispatch centers. Often the prima-
ver for an entire region. See also 911,
ALI.
Service Commission. Also known as
ıission. It's the state agency charged with
phone company utility. In reality, there are
PSC can do: 1. Allow the phone company
s, and 2. Restrict competition to the phone
g all sorts of restrictive rules and regula-
ion in the telecommunications industry
ɔecause of Federal rulings — the state
ir power. This bothers them.
ectral Density.
ɔwer Spectral Density.
hed Digital Service. A BOC service. AT&T
gital Capability (CSDC), also known com-
Accunet Switched 56 service. It allows a
, 56-Kbit/s digital circuits on an end-to-

ıtic Location Identification pALI. A
database record that holds the location of
ctor (whereas an ALI contains the location
one). In wireless E-911, the pALI is used
estimate of the wireless caller's location.
nination Technology.
atic Number Identification pANI.
Number. A number employed in wireless
t can be used to route the call to an appro-
e answering point (PSAP). The pANI gen-
cell/sector from which the call originates,
ies the actual telephone number of a wire-

P-CODE. Program code unrelated to the
ular computer and requiring conversion to
he computer before the program can be
pon. Here's a more technical explanation.
compiled program written for a hypotheti-
interpreted at runtime by a P-code inter-
native environment. P-code has many
ferent implementations, most often porta-
rings.
loophole planted in an operating system
rs.
ground based differential GPS (Global
) which transmits a signal like that of an
, and can be used for ranging.
n Bit Pattern A test pattern consisting
s ensuring that all possible bit combina-
ugh a network without error.
m Test Signal A pseudo random test
onsisting of a bit sequence that approxi-
nal.
A distance measurement based on the cor-
Global Positioning System) satellite trans-
e local receiver's reference code, that has
for errors in synchronization between the
nd the receiver's clock.

Pseudo Ternary A term used in ISDN Basic rate interface data coding. Refers to three encoded signal levels representing two-level binary data (binary "1"s are represented by no line signal, and binary "0"s by alternating positive and negative pulses).

PSI 1. Packet Switching Interface.
2. Pounds per square inch, a unit of air pressure. Telephone cables that are pressurized with nitrogen (because it's not corrosive) are kept at a pressure of around ten to 15 PSI.

PSK Phase Shift Keying. A method of modulating the phase of a signal to carry information. See Phase Modulation.

PSN 1. Packet Switch Node. The contemporary term for the IMPs (Interface Message Processors) originally used in the ARPANET and MILNET, which were the predecessors to what we now call the Internet. PSNs are intelligent switching nodes, which may be in the form of either packet switches or routers.
2. Processor Serial Number. Intel created quite a stir when it released the Pentium III processor in February 1999. Each Pentium III processor chip has a PSN embedded into it during the manufacturing process. The PSN serves as a unique identifier for the processor, and the associated system of which it is a part. If enabled by the client system user, the PSN is provided to the server on request. In combination with other identifiers such as login names and passwords, the PSN provides an additional authentication mechanism and, thereby, an additional level of security. In an e-commerce application, the PSN can be matched up with other personal information as a means of ensuring that you are who you say you are, and that the transaction, therefore, is legitimate. The PSN also provides corporate IT managers with the ability to inventory and track Pentium III computers through the network, without having to track them down physically and enter serial numbers either manually or through the use of a bar code scanner. Privacy advocates created a minor furor when they suggested that the PSN was a means of tracking your activities on the World Wide Web. The furor subsided, but the issue remains.

PSP 1. PCS Service Provider.
2. Payphone Service Provider.
3. Purchase Service Provider. A company which provides ecommerce services for a fee or a commission. I've heard fees of $1 a transaction and also 25% of the total value of the sale.

PSPDN Packet Switched Public Data Network. A PSPDN is a general purpose data network using packet transmission techniques, as opposed to circuit techniques as used for instance in the PSTN. It is used primarily for communications with or between computers.

Psophometer An instrument arranged to give visual indication corresponding to the aural effect of disturbing voltages of various frequencies. A psophometer usually incorporates a weighting network, the characteristics of which differ according to the type of circuit under consideration; e.g., high-quality music or commercial speech circuits.

PSS1 Private Signaling System number 1. The formal name for QSIG, as standardized on a worldwide basis by the ISO (International Organization for Standardization) and the IEC (International Electrotechnical Commission). PSS1 is an ISDN-based protocol for signaling between nodes of a Private Integrated Services Network (PISN). QSIG predates PSS1, and remains the name under which the standard is marketed. See QSIG for a detailed explanation.

PSTN Public Switched Telephone Network. PSTN is an abbreviation used by the ITU-T. PSTN simply refers to the local, long distance and international phone system which we use every day. In some countries it's only one phone company. In countries with competition, e.g. the United States, PSTN refers to the entire interconnected collection of local, long distance and international phone companies, which could be thousands.

PSU Packet Switch Unit.

Pseudo Cut Through A switching mechanism where a packet is transmitted from its source port to its destination port only after the first 64 bytes of the packet are in the source port and its destination port is determined.

Pseudophone A pay phone that looks like a real Bell telephone company phone but is owned by a smaller phone company that charges exorbitant fees for long-distance calls.

Psychic ANI A term created by Howard Bubb from Dialogic to designate what happens when you call someone on one line while they're calling you on the other.

PT Payload Type: Payload Type is a 3-bit field in the ATM cell header that discriminates between a cell carrying management information or one which is carrying user information.

PTC 1. Portable Teletransaction Computers. These are typically handheld devices used for retail (inventory), healthcare (tracking supplies), mobile field repair (reporting fixes), insurance (visiting car wrecks and other disasters), etc. The devices typically have telecommunications capabilities, sometimes wireless, sometimes landlines. And they typically include microprocessors, memories, displays, keyboards, touchscreens, character recognition software, barcode readers, printers, modems and local and/or wide area data radios.
2. Personal Telecommunications Center. Infocorp's name for a product most people call a PDA, Personal Digital Assistant.
3. Pacific Telecommunications Council. A not-for-profit organization open worldwide to anyone or any entity interested in the Pacific hemisphere and involved with telecommunications, broadcasting, informatics, digital media and associated fields. www.ptc.org

PTE Path Terminating Equipment. SONET network elements that multiplex and demultiplex the payload and that process the path overhead necessary to transport the payload. See also Terminating Multiplexers.

PTI An ATM term. Payload Type Indicator: Payload Type Indicator is the Payload Type field value distinguishing the various management cells and user cells. Example: Resource Management cell has PTI=110, end-to-end OAM F5 Flow cell has PTI=101.

PTMPT Point-To-Multipoint: A main source to many destination connections.

PTN Public Telecommunications Network.

PTO Public Telecommunications or Telephone Operator, first established in the U.K. as part of the British Telecommunications Act of 1981, but now refers to PTOs in all European countries. The PTO has typically evolved from the previous PTT, but other companies have also obtained PTO licenses. A PTO may specialize in certain region or city or may service the entire country.

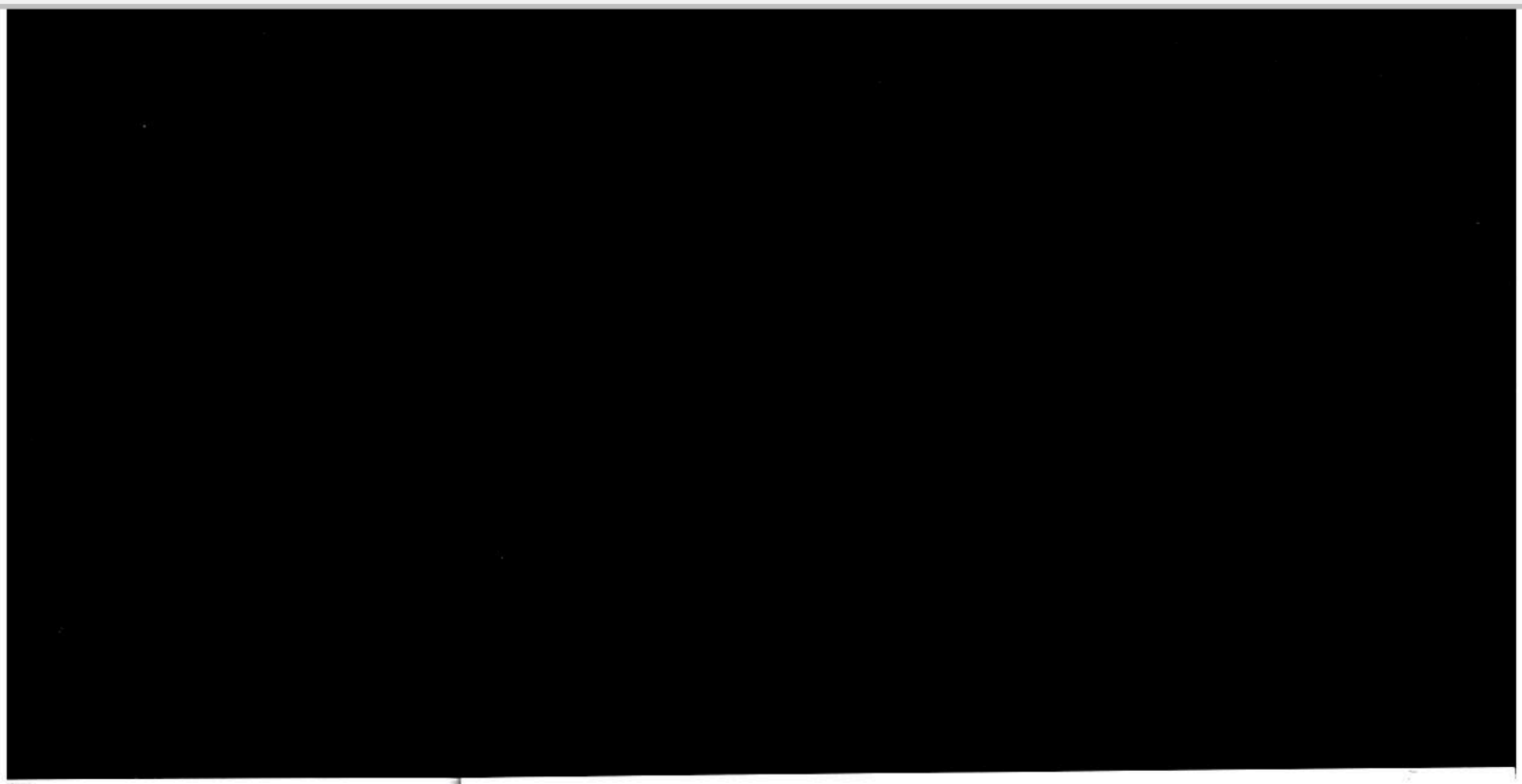
PTR See Problem Tracking Report.

PTS Presentation Time Stamp: A timestamp that is inserted by the MPEG-2 encoder into the packetized elementary stream to allow the decoder to synchronize different elementary streams (i.e. lip sync).

PTS Public Telecommunications Systems.

PTSE An ATM term. PNNI Topology State Element: A collection of PNNI information that is flooded among all logical nodes within a peer group.

PTSP An ATM term. PNNI Topology State Packet. A type of PNNI routing packet used to exchange reachability and



e computer tape drive is fast forwarding, it cannot count acters to find the record, and must read in the data you t want (and throw it away), before it gets to the data you l. Random access is much faster than sequential access.

uential Hunting See Rollover.

uential Logic Element A device that has at least one ut channel and one or more input channels, all character- by discrete states, such that the state of each output chan- s determined by the previous states of the input channels.

uential Packet Exchange SPX. Novell's imple- tation of SPP for its NetWare local area network operating em.

ial One after another. One event after another. Serial es from the word "series" — which is classically defined group or a number of related or similar things, events, arranged or occurring in temporal, spatial, or other order uccession. In telecom, there are basically two types of transmission — serial and parallel. Serial is one stream ta, one bit following the previous bit. Parallel is the same m of data, but broken into several streams running ltaneously. The reason to go parallel is that several ms will often be faster than one stream. See Parallel smission and Serial Transmission.

ial Bus Serial Bus was the original name for Intel's stan- for a type of very local, local area network that would be for connecting peripherals to the motherboard of a PC. e'd be one plug on the back of the PC into which you'd chain various peripherals, including a mouse, a key- d, speakers, printers, a microphone and a telephone. The of serial bus is to clear away all the clutter on the back of C. In March of 1995 when the first technical specs were sed, serial bus' name was changed to Universal Serial (I don't know why). See USB.

ial Call Telephone system feature set up by the atten- when an incoming calling party wishes to speak with than one person internally. When the first party hangs he call automatically moves to the second person the out- party wants to speak with. When that person hangs up, the call automatically goes to the third person, etc.

ial Communication Networks (local and long dis-) use the RS-232 serial communications standard to information to serial printers, remote workstations, te routers, and asynchronous communication servers.

Parity is a method of checking for errors in transmitted data. You can set parity to odd or even, or not use parity at all. When the character length is set to 8, parity checking cannot be done because there are no "spare" bits in the byte. When the character length is 7, the eighth bit in each byte is set to 0 or 1 so that the sum of bits (0s and 1s) in the byte is odd or even (according to the parity setting). When each character is received, its parity is checked again. If it is incorrect (because a bit was changed during transmission), the communications software determines that a transmission error has occurred and can request that the data be retransmitted.

Stop bit is a special signal that indicates the end of that character. Today's modems are fast enough that the stop bit is always set to one Slower modems used to require two stop bits. XON/XOFF is one of many methods used to prevent the sending system from transmitting data faster than the receiving system can accept the information. See also EIA/TIA-232-E, RS-232-C and serial data transmission.

Serial Data Transmission Serial data transmission is the most common method of sending data from one DTE to another. Data is sent out in a stream, one bit at a time over one channel. When a computer is instructed to send data to another DTE, the data within the computer must pass through a serial interface to exit as serial data. Then it passes through ports, cables, and connectors that link the various devices. The boundaries (physical, functional, and electrical) shared by these devices are called interfaces. See serial communications.

Serial Digital Digital information that is transmitted in serial form. Often used informally to refer to serial digital television signals.

Serial Interface The "lowest common denominator" of data communications. A mechanism for changing the parallel arrangement of data within computers to the serial (one bit after the other) form used on data transmission lines and vice versa. At least one serial interface is usually provided on all computers for the connection of a terminal, a modem or a printer. Sometimes also called a serial port. See EIA/TIA-232-E, RS-232-C, Serial Interface Card and the Appendix.

Serial Interface Card A printed circuit card which drops into one of the expansion slots of your computer and changes the parallel internal communications of your computer into the one-bit-at-time serial transmission for sending information to your modem or to a serial printer.

Series A connection of electrical apparatus or circuits in which all of the current passes through each of the devices in succession or on after another. See also Parallel.

Series 11000 An AT&T private line long distance tariff created in the 1970s and designed expressly to reduce MCI's chances of selling any private lines and thus of surviving. It was thrown out by the FCC and the tariff figured in MCI's and the Federal Government's antitrust against AT&T.

Series Circuits In a series circuit, the electric current has only one path to follow. All of the electric current flows through all the components of the circuit. To calculate the resistance of a series circuit add up the resistance of each of the components in the circuit. In contrast, see parallel circuits.

Series Connection A connection of electrical apparatus or circuits in which all of the current passes through each of the devices in succession or on after another. See also Parallel.

Series RF Tap A bugging device. It is a radio transmitter which is installed in series with one wire of the telephone circuit. Normally a parasite (i.e. takes power from the phone line). Transmits both sides of the conversation. It transmits only when the phone is off-hook. See also Series.

Server 1. Hardware definition of server: A server is a shared computer on the local area network that can be as simple as a regular PC set aside to handle print requests to a single printer. Or, more usually, it is the fastest and brawniest PC around. It may be used as a repository and distributor of oodles of data. It may also be the gatekeeper controlling access to voice mail, electronic-mail, facsimile services. At one stage, a local area network had only one server. These days networks have multiple servers. Servers these days have multiple brains, large arrays of big disk drives (often in redundant arrays) and other powerful features. New powerful servers are called superservers. A $35,000 superserver today can match the performance of a $2 million mainframe of ten years ago. Then again, according to Peter Lewis of the New York Times, the lowliest client today has more computing power than was available to the entire Allied Army in World War II. See Downsizing for some of the benefits of running servers as against mainframes.

2. Software definition of server: A server is a program which provides some service to other (client) programs. The connection between a client program and the server program is traditionally by message passing, often over a local area or wide area network, and uses some protocol to encode the client's requests and the server's responses.

r of manufacturers, while providing the flexibility and
y of a wireless solution. SWAP is expected to yield a
s home network to share voice and data between
such as PCs, peripherals, PC-enhanced cordless
, and devices yet to be developed. SWAP also is
d to allow the sharing of a single Internet connection
st multiple such devices. See also HRFWG.

File Some operating systems and applications let
e more memory than what you have in RAM. They do
pretending that part of your hard disk is RAM memo-
/ do this by creating a swap file on your hard disk and
ng memory back and forth. Some computer systems
s virtual memory. You need to be careful with swap
ever turn your machine off when you have applications
. If you do you're likely to leave a huge swap on your
sk, which you may not find (it's hidden) and which
stem may not dispose of. To get back the space on
rd disk, you'll need to erase it separately.

Standard Wireless AT Command Set. An extension to
es AT command set to support wireless modems, such
e used in standard AMPS analog cellular phones.

ervice Wire Center.

AC Swedish Board for Technical Accreditation. They
tablished two standards, which effectively limit radia-
issions, MPR1 and MPR2. These standards specify
m values for both alternating electric fields and mag-
lds and provide monitor manufacturers with guide-
creating low emission monitors. There is, as yet, no
proof of harm from normal computer monitors. But
ument goes that they weren't so sure about nicotine in
s 30 years ago. And look at us 30 years later.

Acquisition A technique whereby the frequency of
l oscillator is slowly swept past the reference to assure
pull-in range is reached.

An increase from nominal voltage lasting one or more
les.

Abbreviation for SWITCH HOOK. Originally referred
tual hook on older phones that held the receiver, and
upward to close a switch and activate the phone when
iver was picked up. Today the term refers to any of
buttons and plungers that are pressed down and
when the handset is put down (physically "hung up"
d days) and picked up.

Society for Worldwide Interbank Financial

phillips head screwdriver and a pair of scissors. A corkscrew also is useful.

Switch A mechanical, electrical or electronic device which opens or closes circuits, completes or breaks an electrical path, or selects paths or circuits. Switches work at Layers 1 (Physical) and 2 (Data Link) of the OSI Reference Model, with emphasis on Layer 2. A switch looks at incoming data (voice data, or data data) to determine the destination address. Based on that address, a transmission path is set up through the switching matrix between the incoming and outgoing physical communications ports and links. Data switches (e.g., LAN switches and packet switches) also typically contain buffers, which can hold data packets in temporary memory until the necessary resources are available to allow the data packets to be forwarded. Voice switches, of course, don't, because you can't delay voice. Switches work link-by-link, with multiple switches typically being involved in complex networks; each switch forwards the data on a link-by-link (hop-by-hop) basis. Routers are highly intelligent data switches which are capable of setting up paths from end-to-end, perhaps in consideration of the level of privilege of the user and application. Routers commonly are used at the edges of complex data networks, where intelligence is required to set up appropriate network paths. Although such intelligent decisions impose some delay on the packet traffic, they are made only at the ingress and egress edges of the network. The routers often instruct switches in the core of the network, where speed is of the essence — switches aren't as intelligent as routers, but they are faster and less expensive. See also Ethernet Switch, OSI Reference Model and Router.

Switch Based Resellers Switch-based resellers lease facilities from national carriers or large private line networks. They resell services provided over those facilities under their own name and provide sales, customer service, billing and technical support. Switch-based resellers own or lease their own switching equipment and, in some cases, own their transmission facilities. they typically provide originating service on a regional basis. See also Switchless Resellers.

Switch Busy Hour The busy hour for a single switch.

Switch Domain An SCSA definition. A single instance of a particular technology-specific connection type. See S.100.

Switch Driver Protocol Mapper Code running on a Telephony Server that translates between a particular switch-

hook). When the handset is raised, the plunger pops up (the phone goes off-hook). Momentarily depressing the switch hook (under 0.8 of a second) can signal various services such as calling the attendant, conferencing or transferring calls.

In ISDN, the AT&T ISDN sets have several switch hooks; one for the handset, one for the speakerphone, a "virtual" switch hook, and if an adjunct is attached, an adjunct switch hook. If all switch hooks are "on-hook" or hung up, the ISDN set is on-hook. If any switch hook is "off-hook," then the ISDN set is off-hook. If more than one switch hook is off-hook, the ISDN set uses a complex algorithm to determine whether the handset, the speakerphone, or the adjunct has precedence (only one can be used at a time).

Switch Hook Flash A signaling technique whereby the signal is originated by momentarily depressing the switch hook. See Switch Hook.

Switch Interface The Ethernet MAC controller interface. In general, a switch interface on a switch is the same as a port. However, the number of interfaces does not necessarily correspond to the number of ports. For example, a MAB port on a switch may be a 4-port repeater.

Switch Message Information that originates in a switch. A Call-Progress Event Message is one category of switch messages. Delivered is an example of a call-progress event message.

Switch Over When a failure occurs in the equipment, a switch may occur to an alternative piece of equipment.

Switch Port An SCSA definition. A resource that allows a Group to communicate with another Group. All Groups implicitly possess a Switch Port as a secondary resource, but in order to use it, the application must explicitly connect the Switch Ports of two Groups.

Switch Redirect A central office service which instantly, on command, redirects thousands of phone numbers to different phone numbers. Such a service has great use in a disaster.

Switch Room The room in which you put phone equipment. Also called the Phone Room. (What else?) The Phone Room should be large, clean and should stay at roughly seventy degrees and 50% humidity. You, the customer, are responsible for the quality and condition of your phone room. The messier it is, the hotter it is, the dirtier it is, the poorer your phone system (and its technicians) will function.

Switch Tender In the old, old days, the switch tender was