



Alcatel-Lucent

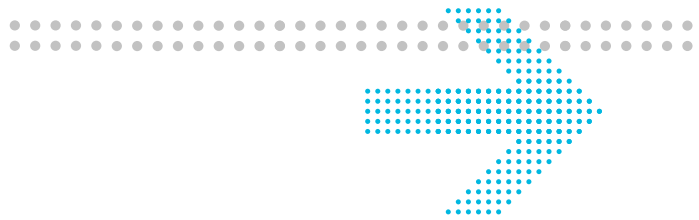
Master Glossary

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Master Glossary



Reason for revision

Update Master Glossary to incorporate Alcatel-Lucent templates.

Issue	Issue Date	Section	Reason
01	February 2003	Entire manual	New Release
02	July 2011	Entire manual	Update manual

Symbols

μm
Micrometer.

Numerics

1:1
A 1:N system where N=1.

1:N
(Pronounced “one for N”) N+1 full-duplex channels, N main and one standby (or protection). The main channels provide service: If a main channel fails, the standby channel switches to provide service in place of failed channel. Switching is revertive, which permits extra traffic to be carried on the standby channel. (For example, when the main channel is repaired, service will be switched back to it, thus making the standby channel available to protect a subsequent failure.)

1+1, 1P1
Non-expandable protection scheme; (Pronounced “one plus one.”). Two full-duplex channels: one active, one standby; either can provide service. Protection switching behavior may be revertive or nonrevertive (normal case). When active channel fails, traffic is switched to standby channel. In revertive, one channel is the preferred active; when preferred channel is repaired, traffic switches back to it. In nonrevertive neither channel is preferred, and switch-back does not occur.

1301 NMX
Alcatel-Lucent Network Manager Explorer. 1301 NMX Shell is the common object-oriented framework for Alcatel-Lucent Network Element (NE) management applications; provides low-level services essential to all 1301 NMX applications. Upon installation of the 1301 NMX, upgrades are made to the Core 5.x files so they operate with the new environment; upon upgrade, user cannot use HP OpenView© to access the 1301 NMX.

1353 GEM

Alcatel-Lucent EML network manager

1353 NM

The Alcatel-Lucent 1353 NM is a single Element Management platform for use in multi-service, multi-technology transport networks.

1354 RNM

The Alcatel-Lucent 1354 Ring Network Manager (RNM) is a network management application that manages a ring network as a single entity instead of as a set of independent network elements.

1353 SH

Alcatel-Lucent Europe EML network manager

1631 SX

Alcatel-Lucent STS-1, DS3, DS1 Digital Cross-Connect (switches at VT1.5 rate).

1671 Service Connect

The Alcatel-Lucent 1671 Service Connect is a next generation, multiservice cross-connect. Supports narrowband, wideband, and broadband cross-connect functionalities. Engineered for networks requiring speeds from DS1 to OC-192. Alcatel-Lucent STS-1, DS3, OC-3, OC-12, OC-48, OC-192 Digital wideband Cross-Connect (switches at VT1.5 rate).

1677 SONET Link

The Alcatel-Lucent 1677 SONET Link combines the capabilities of a Digital Cross-connect System (DCS) and a Dense Wavelength Division Multiplexing (DWDM) application. The system supports network and tributary interfaces ranging in speed from DS3 rates up to SONET OC-192 and GIGE rates.

1678 Metro Core Connect

The Alcatel-Lucent 1678 Metro Core Connect is a broadband digital cross-connect node.

1696 Metro Span

The Alcatel-Lucent 1696 Metro Span is a Dense Wave Division Multiplexer (DWDM) that multiplexes up to 32 channels at data rates up to 10 Gb/s for service in metropolitan networks.

2SR

2 Second Response.

42S

40-input to 20-output switch ASIC.

2FBLSR

Two-Fiber Bidirectional Line-Switched Ring. See also Bidirectional Ring (Bi-Ring).

4FBLSR

Four-Fiber Bidirectional Line-Switched Ring. See also Bidirectional Ring (Bi-Ring).

802.1E

An IEEE protocol that allows the loading of a file on an NE on a multicast or point-to-point basis

°C

Degrees Celsius or degrees Centigrade; temperature scale on which 0 °C is freezing point and 100 °C is boiling point of water under normal atmospheric pressure.

°F

Degrees Fahrenheit; temperature scale on which 32 °F is freezing point and 212 °F is boiling point of water under normal atmospheric pressure.

A

A

Amperes.

ABAM

A four-digit cable identification code for T1-compatible 22 American Wire Gauge (AWG) copper wire, a standard for paired copper cabling.

ABN

Abnormal alarm.

ABT

Abort Output Function.

ABN CONFIG

Abnormal Configuration.

ABTM

A four-digit cable identification code for T1-compatible 26 American Wire Gauge (AWG) copper wire; standard for paired copper cabling.

Access Identifier (AID)

Specifies the object entity (port or equipment) specified in a TL1 command; used to specify “object entities” within an NE to which user commands are to be applied. Facilities and signals are examples of object entities. The term “object entity” is used by Bellcore; it does not mean the NE is implemented in an object-oriented manner.

ACD

1. Alcatel-Lucent Control Domain
2. Access Control Domain

ACM

Administrative Communications Module (module).

ACO

Alarm Cutoff. See also Alarm Cutoff (ACO).

ACT

1. Active redundant.
2. Active unit.
3. Active secondary service state; indicates that the entity is capable of being protected and is currently the active entity.

ACL

Administration Communication Link. An RS-485 signal level bus for communication between the APS and all SI48 and matrix shelves. Up to 2 Mb/s half-duplex communication link; implements HDLC-NRM multidrop communication configuration; supports up to 2000 feet bus length; and consists of transmit data, receive data, clock, reset enable, and CPI.

ACSE

Association Control Service Element. An OSI convention used to establish, maintain, or terminate a connection between two applications.

Action Button

A pushbutton common to 1301 Network Manager (NM) dialog boxes.

ACU

Alarm Communications Unit.

Add-Drop

Multiplexer (ADM)

Network elements that provide access to all N, or some subset M of Synchronous Transport Signal (STS) line signals contained within an OC-N optical channel. (M is a standard hierarchical level vN.) STSs are added to (inserted) and/or dropped from (extracted) the OC-N signal as it passes through the ADM. ADMs include linear applications between terminals (referred to as a Linear ADM or LADM) and ring network applications (referred to as unidirectional ring [uniring] and bidirectional ring [bi-ring] ADMs). See also Linear Add-Drop Multiplexer (LADM).

ADDR

Address.

ADL

1. Add-Drop Linear. See also Linear Add-Drop Multiplexer (LADM).
2. Asynchronous Data Link

ADL12

Add-Drop Linear for OC12. See also Linear Add-Drop Multiplexer (LADM).

ADM

See also Add-Drop Multiplexer (ADM).

ADMIN

Administrative domain server.

Administration

A 1301 Network Manager (NM) main menu option; displays the general status and inventory of a system.

Administrator

A user who has access to all security, system, and database maintenance functions in addition to standard user capabilities.

ADR

Add-Drop Ring.

ADR12

Add-Drop Ring for OC12.

ADSL

Asymmetric Digital Subscriber Line. See also Asymmetric Digital Subscriber Line (ADSL).

AFI

Address Format Identifier.

AGC

Automatic Gain Control.

AIC

Application Identification Channel. Identifies DS3 frame application (C-bit=1, W23=alternate 0s and 1s).

AID

See Access Identifier (AID).

AINS

Automatic In Service.

AINSTH

Automatic In Service Threshold

AIS

See Alarm Indication Signal (AIS).

AISL

Alarm Indication Signal, Line. See Alarm Indication Signal (AIS).

AISS

AIS Second.

AIU

Attachment User Interface.

Alarm (ALM)

Binary visual or audible indication of trouble, significant number of irregularities, or failure; signifies a malfunction or abnormality within the communications equipment; usually classified as minor, major, or critical.

Alarm/Condition Codes

1. Critical (CR) or (CRI)*.
2. In service (IS).
3. Maintenance (MAINT) or (MT).
4. Major (MAJ) or (MJ)*.
5. Manual control (ManCont).
6. Manual operation (MAN).
7. Memory administration (MA)*.
8. Minor (MN) or (MIN)*.
9. Out of Service (OOS).

* Also referred to as Severity level or Notification Code.

Alarm Cutoff (ACO)

An ACO silences an office alarm.

Alarm Indication

Indication of upstream transmission span failure. In a network of tandem maintenance spans, service-affecting failures may occur, which disrupt normal signals and cause the generation of maintenance alarms.

Alarm Indication Signal (AIS)

A unique line signal sent downstream in a digital network to indicate that an upstream failure is detected and alarmed. Signal replaces normal traffic when a maintenance alarm is activated. There are two types: American (framed; alternating 1s and 0s) and nonstandard (unframed; all 1s).

Alarm Log

Record of recent alarm events logged for a particular Network Element (NE).

ALC

1. Automatic Level Control.
2. Automatic Laser Control.

ALM

See Alarm (ALM).

ALMAP

Alcatel-Lucent Management Platform

ALMID

Alarm Identifier, parallel E2A.

ALS

Automatic Laser Shutdown.

ALSP

AIS or LOP-Path Second.

ALTAID

Alternate Equipment Access Identifier.

Alternate Mark

Inversion (AMI)

1. Line coding format in T-1 transmission systems, whereby successive ones (marks) are alternately inverted (sent with polarity opposite that of the preceding mark).

2. A line code that uses a ternary signal to convey binary digits; successive binary ones are represented by signal elements normally of alternating, positive/negative polarity but equal in amplitude, and in which binary zeros are represented by signal elements with zero amplitude (an AT&T definition).

AMC

Alcatel-Lucent Management Console

American National Standards Institute (ANSI)

A standards-setting, non-government organization that develops and publishes standards for transmission codes, protocols, and high-speed languages for “voluntary” use in the United States.

AMI

See Alternate Mark Inversion (AMI).

AMR

Alternate Mark Inversion.

Angled Polished Connector

A method used to polish the end of fiber optic cable.

ANS

Alcatel Network Systems, Inc., now known as Alcatel-Lucent

ANSAID

Alcatel Network Systems, Inc. equipment Access Identifier.

ANSI

See American National Standards Institute (ANSI).

AOD

Automatic Offline Diagnostics.

AOW

Analog Orderwire. See Order Wire, Orderwire (OW).

AP

Administrative Processor (generic term for an APS).

APC

See Angle Polished Connector (APC)

APD

Avalanche Photo Diode.

API

Application Programming Interface

APM

Administrative Processing System, Minor.

APP

1. Application software kit.
2. ACL Patch Panel (module).

Application-

Specific Integrated Circuit (ASIC)

A chip built for a specific application and used by manufacturers to consolidate many chips into a single package, reducing system board size and power consumption. Many video boards and modems use ASICs. ASICs span Programmable Array Logic (PAL) devices, Electrically Programmable Logic Devices (ELPDs), Field-Programmable Gate Arrays (PPGAs), standard cell-based devices, and full custom-designed Integrated Circuits (ICs).

APR

Alarm Processing Remote.

APS

1. Automatic Protection Switching. See Protection Switching (PS).
2. Administrative Processing System.

APSB

Automatic Protection Switching Byte. See Protection Switching (PS).

APSCM

Automatic Protection Switching Channel Mismatch. See Protection Switching (PS).

APSCONF

Automatic Protection Switching Configuration error. See Protection Switching (PS).

APSD

Automatic Power Shutdown.

APSI

Automatic Protection Switching Inhibit. See Protection Switching (PS).

Arrow Keys

Collective name used for up, down, left, and right cursor-moving keys, designated with directional arrows.

AS

1. Assigned
2. Alarm Surveillance

AS&C

Alarm, Surveillance & Control. Part of the TABS protocol for the general telemetry processor.

ASCII

American Standard Code Information Interchange

ASAM

ATM Subscriber Access Multiplexer. (Also called Digital Subscriber Line Access Multiplexer [DSLAM].)

ASE

Amplifier Spontaneous Emission.

ASIC

See Application-Specific Integrated Circuit (ASIC).

Asymmetric Digital Subscriber Line (ADSL)

An evolving high-speed transmission technology originally developed by Bellcore; now standardized by American National Standards Institute (ANSI) as T1.413; European Technical Standards Committee (ETSI) contributed an annex to the standards to reflect European requirements. ADSL uses existing Unshielded Twisted Pair (UTP) copper wires from the telephone company Central Office (CO) to the subscriber premises; involves electronic equipment (ADSL modems) at the CO and subscriber premises; and sends high-speed digital signals up and down those copper wires, sending more information one way than the other, hence the term *asymmetric*.

ASN.1

Abstract Syntax Notation One. Replacement syntax for TL1 used for machine-to-machine communications.

Asynchronous mode

Bytes are sent without clocking information. Each byte is identified by a start bit and terminated by one or more stop bits.

Asynchronous signal

A digital signal in which there is no common clock. Timing must be recovered from information sent within signal.

Asynchronous Transfer Mode (ATM)

A multiplexing/switching technique that organizes information into fixed-length cells with each cell consisting of an identification header field and an information field; the transfer mode is asynchronous in that the recurrence of cells depends on the required or instantaneous bit rate. See Distributed Queue Data Bus (DQDB).

ATAG

Autonomous Message Tag; an automatically generated tag for autonomous reports.

ATM

See Asynchronous Transfer Mode (ATM).

ATO

Assemble To Order.

Attribute(s)

1. Constitutes a specific property about an object.
2. The form of information items provided by the X.500 Directory Service; directory information base consists of entries, each having one or more attributes; each attribute has a type identifier together with one or more values.
3. MS-DOS file information, indicating whether file is read-only, hidden, or system, and whether it has been changed since it was last backed up.

AU

Administrative Unit, SDH term.

AUD

Audible alarm.

AUG

Administrative Unit Group, SDH term.

AUI

Attachment Unit Interface.

AUXINV

Auxiliary Inventory (equipment).

AWG

American Wire Gauge.

AXM

SX Administrative Cross-Connect Manager Subsystem.

B

Bandwidth

Capacity of a network element allocated to a user.

Basic Rate

Interface (BRI)

Two 64 Kb/s B channels and one 16 Kb/s D channel comprise BRI and yield a total of 144 Kb/s. The B channels send data; the D channel sends signaling information for routing data coming in over the B channels. BRI enables users to talk on the telephone and send email messages simultaneously. BRI users must be within 3.4 miles of the Central Office (CO) offering BRI or the telephone company would have to use repeater equipment to boost the signal. Compare with Primary Rate Interface (PRI).

Bayonet Neill Concelman (BNC)

A connector for coaxial cable such as that used for some video connections and RG58 connections. A BNC connector has a bayonet-type shell with two small knobs on the female connector that lock into spiral slots in the male connector when it is twisted on. (Different sources expand BNC as Bayonet Navy Connector, British Naval Connector, or Bayonet Nut Connection.)

B3ZS

1. Bipolar with 3 Zero Substitution. The line code used in DS3 transmission systems. This code follows the bipolar rule; however, when three consecutive zeroes occur, the three zeroes are replaced with a unique code that contains bipolar violations in a defined manner.

2. Bipolar 3-Zero Substitution (DS3/STS1). See Bipolar Signal.

B8ZS

Bipolar 8-Zero Substitution (DS1). See Bipolar Signal.

BAR

Base Address Register.

Baud

Specifies bit rate at which CPORT operates. This parameter is applicable only to USI type ports because X.25 connections are synchronous.

BBE

Background Blocks Errors

bdfb

Battery Distribution feeder or fuse bay

BDLA

Bidirectional Line Amplifier. See Bidirectional Ring (Bi-Ring).

BER

See Bit Error Rate (or Ratio) (BER).

BER-HT

Bit Error Ratio-High Threshold. See Bit Error Rate (or Ratio) (BER).

BERL

Bit Error Ratio, Line. See Bit Error Rate (or Ratio) (BER).

BER-LT

Bit Error Ratio-Low Threshold. See Bit Error Rate (or Ratio) (BER).

BERP

Bit Error Ratio, Path. See Bit Error Rate (or Ratio) (BER).

BFL

Baffle assembly.

Bidirectional

Coupler (optical)

A device that combines transmit and receive optical signals within a single fiber.

Bidirectional Ring (Bi-Ring)

A Synchronous Optical Network (SONET) ring network configuration in which traffic between any two nodes flows in a single path between the two nodes. The other path around the ring is used for protection purposes, providing high reliability. Bi-rings allow reuse of bandwidth around the ring (unlike a unidirectional ring) but are technically much more complicated to protect.

Bidirectional Switching

The protection switching scheme in which both paths of the duplex channel are switched to the protection path when either fails.

BIP

See Parity Bit Interleaved Parity-N (BIP-N).

BIPL

Bit Interleaved Parity errors, Line. See Parity Bit Interleaved Parity-N (BIP-N).

BIP-N

See Bit Interleaved Parity-N (BIP-N).

Bipolar Signal

1. A 3-level digital signal in which logic 1 bits are pulses (typically RZ) which alternate in polarity, and logic 0 bits are 0 volts. The resulting waveform has a dc level of 0 volts. Also referred to as AMI.

2. A signal having two non-zero polarities. It must have two-state or three-state binary coding scheme; is usually symmetrical with respect to zero amplitude.

Bipolar Violation (BPV)

The presence of two consecutive same-polarity *one* bits on the T carrier line.

BIPS

Bit Interleaved Parity errors, Section. See Parity Bit Interleaved Parity-N (BIP-N).

Bi-Ring

Bidirectional Line-Switched Ring (BLSR). See Bidirectional Ring (Bi-Ring).

BIST

Built-In Self Test

Bit

Binary digit; smallest unit of data in a data stream. The amount of information obtained by asking a yes-or-no question; a computational quantity that can take on one of two values: true and false or 0 and 1; the smallest unit of storage, sufficient to hold one bit. A bit is *set* if its value is true or 1, and *reset* or *clear* if its value is false or 0. Regarding setting and clearing bits: To toggle or *invert* a bit changes it (from 0 to 1 or from 1 to 0).

Bit Error Rate (or Ratio) (BER)

Rate at which errors occur in a digital signal divided by the number of transmitted bits. See also Severely Errored Seconds (SES) and Signal Fail (SF).

**Bit Interleaved
Parity-N (BIP-N)**

Method of error monitoring. If even parity is used, the transmitting equipment generates an N-bit code over a specified portion of the first bit of all N-bit sequences in the covered portion of the signal, and the second bit provides even parity over the second bits of all N-bit sequences within the specified portion, etc. Even parity is generated by setting the BIP-N bits so that there is an even number of ones in each of all N-bit sequences including the BIP-N.

Bits per Second (b/s)

The rate at which data is sent over some communication line. For example, data rate of a modem is usually measured in kilobits per second.

BITS

1. Building Integrated Timing Source
2. See Building Integrated Timing Supply (BITS).

BITSSYNC

Output synchronization

BKRST

Backup and Restore

BLSR

Bidirectional Line-Switched Rings

BLT

Both-way Line Termination

BNC

1. A coaxial connector type commonly known by abbreviation of manufacturer Bayonet-Neill-Concelman
2. See also Bayonet Neill Concelman (BNC).

BOC

Bell Operating Company

Boot, BOOT

Processor running boot code. To load and initialize the operating system on a computer. See also Bootdisk.

Bootdisk

In reference to Operating System (OS): The magnetic disk (usually a hard disk) from which an OS kernel is loaded (or "bootstrapped"). This second phase in system start-up is performed by a simple bootstrap loader program held in Read-Only Memory (ROM), possibly configured by data stored in some form of writable non-volatile storage.

BPM

Binary Performance Monitoring

b/s

See Bits per Second (b/s).

BRDG

Multipoint Data Bridge

BSC

Basic Switch Chip

BPV

See Bipolar Violation (BPV).

BRI

See Basic Rate Interface (BRI).

Buffer

A temporary storage device that compensates for the difference between data transmission speeds when transferring data from one device to another

Building Integrated Timing Supply (BITS)

In North America, the clocks that provide and distribute timing to a wire line network lower levels; known in the rest of the world as Synchronization Supply Unit (SSU).

Buttons

The 1301 Network Manager (NM) controls that initiate actions and change data object properties or the interface itself.

Byte

A group of eight bits; also called an octet.

C

CAL

Current Alarm List

CAMR

Centralized Autonomous Message Reporting

Cancel Button

A 1301 Network Manager (NM) action button that exits current and returns to previous screen. Changes made to the screen fields since the last action that saved these changes, prior to using the Cancel button, are ignored.

Card

A module might contain one, two, three, or more cards. The MATX101 Matrix Module (1680 OGM) is an example of a circuit pack that contains five cards. In the past, there was nearly always one card in each module; therefore, “card” might be used when “module” was actually meant. Components (for example, integrated circuits, resistors, capacitors, etc.) mount on the card or Printed Wiring Board (PWB). Conductors in the PWB carry electrical current from one component to another.

Card Presence Indicator (CPI)

Indicates presence or absence of a module; provides an interrupt to the shelf processor through the Serial Communications Interface (SCI) for modules that have a microcontroller; enables shelf processors to detect removal and/or insertion of any module (or circuit pack) in the shelf. See also Serial Communications Interface (SCI).

Card Presence Indication (CPI)

A distributed diode matrix structure used to allow the control system to detect the presence of installed circuit packs in the shelf.

CAS

Channel-Associated Signal

CASMIM

Connection and Service Management Information Model

CB

Circuit Breaker (also *CKB*)

C-Band

See also Conventional-Band (C-Band).

CBIT

Parity monitoring. Select CBIT monitoring when operating with equipment that generates CBIT parity to monitor signal performance.

CC

1. Communication Controller
2. See also Country Code (CC).

CCT

Cross-Connect Type

CCAL

Command Community Authorization Level

CCFC

Command Community Functional Category

CCITT

International Telegraph and Telephone Consultative Committee, now known as International Telecommunications Union (ITU).

CCL

1. See Computer Control Language (CCL).
2. Configuration Control Letter
3. See Coral Common LISP (CCL).

CCLK

Composite Clock

CCM

Cross-Connect Map

CCN

Cross-Connect Network

CD

See Chromatic Dispersion (CD).

CDA

Central Clock Distribution (circuit pack). A circuit pack that distributes 24 modulated 155.52 MHz reference clocks to Clock Distribution B circuit packs.

CDAC

Custom-Defined Alarms and Controls

CDB

Clock Distribution (module). A module that regenerates and distributes 24 modulated 155.52 MHz clocks to their associated user circuit packs.

CDE

Common Desktop Environment

CDM

See Code Division Multiple Access (CDMA).

CDU

Clock Distribution Unit (module)

Central Office (CO)

Typically called C-O; a telephone company facility where subscriber lines are joined to switching equipment for connecting other local and long-distance subscribers to each other; sometimes it means wire center in which there are several switching exchanges. The overseas term for CO is “public exchange.”

CEPT

European Conference of Postal Telecommunication

CEV

See Controlled Environmental Vault (CEV).

CFA

Carrier Failure Alarm

CFC

1. Clock and Frame Converter
2. Clock Frame Circuit

CGA

Carrier Group Alarm

Check Box

A 1301 NM control that allows the user to turn on or turn off a control.

Checksum

The sum of a group of data items used for error checking. Checksum is computed by the sending computer based upon an algorithm that counts the bits going out in a packet. The check digit is then sent to the other end as the packet tail (or trailer). As the packet is being received, the receiving computer goes through the same algorithm. If the receiving computer goes through the same algorithm, and if the check digit it comes up with is the same as the one received, all is well. Otherwise, it requests the packet be sent again.

CHIME

Circuit Installation and Maintenance Package

Chromatic

Dispersion (CD)

The generally known form of dispersion found in single-mode fiber; determined by the CD characteristics of the fiber; temporal in nature, related only to the optical signal wavelength. An optical receiver is capable of accepting a certain amount of dispersion broadening, essentially where individual pulses cannot be distinguished. Because dispersion is the broadening of a transmit pulse of finite width, the narrower the transmit pulse, the more the dispersion that can be tolerated in a system. A transmitter with a narrower spectral width allows the system to tolerate more dispersion. Effects of CD are measured in PICO-seconds (ps). The CD coefficient that describes fiber is given in terms of ps/nm-km. CD tolerance of a system is determined by the transmitter being used and is given in ps/nm. Like attenuation, the CD characteristics of fiber are wavelength dependent.

CID

1. Calling address Identification
2. Communications Interface Device
3. Connect Identification Device
4. Connection Identifier
5. Craft Interface Device

CIF

DS3/STS1 Customer Interface

CIM

Communications Interface Module

CIMAP

Circuit Installation and Maintenance Package

CIOP Circuit Pack

Coaxial Input/Output panel for EC1/DS3 terminations; representation of the equipment that can be inserted or assigned to a slot within a shelf; also known as CIOP module.

Circuit Pack

Representation of equipment that can be inserted or assigned to a slot within a shelf; the SYNC601 Master Sync is an example of a circuit pack that contains one card, otherwise known as a Printed Wiring Board (PWB). “Module” is the name used for decades by Alcatel, Rockwell International, and probably Collins Radio. “Circuit pack” came into use as the result of a customer requirement.

CIT

1. Craft Interface Terminal (also known as user interface terminal)
2. Customer Interface Terminal

CIU

Communication Interface Unit (sometimes referred to as Customer Interface Unit).

CKB

Circuit Breaker (also called *CB*)

CL

Cleared

Cladding

1. The transparent material, usually glass, that surrounds the optical fiber core. Cladding glass has a lower refractive index than core glass. As the light signal travels down the central core transmission path, it naturally spreads out (modal dispersion). The cladding causes the light to be reflected back into the central core, thereby serving to maintain the signal strength over a long distance.

2. When referring to a metallic cable, a process of covering with a metal (usually achieved by pressure rolling, extruding, drawing, or swagging) until a bond is achieved.

CLEI code

Common Language Equipment Identification code (assigned by Bell Communications Research Inc. [Bellcore]).

CLFI

Common Language Facility Identifier

CLK

Clock

CLLI

Common Language Location Identifier. Indicates the location of circuit packs at a network element.

CLNP

Connectionless-node Network Layer Protocol. OSI network layer protocol that does not require a circuit to be established before data is transmitted.

CLNS

Connectionless Network Service

CLO

Command Lockout

Clock (CLK)

When used alone, refers to a primary synchronizing signal. It may appear with a subscript to refer to the synchronizing signal on a particular signal path.

Close Button

A 1301 Network Manager action button that closes the screen without sending any commands to the network element.

CMD

Circuit Breaker (also called *CKB*)

CMI

Coded Mark Inversion

CMIP

See Common Management Information Protocol (CMIP).

CMIS

See Common Management Information Services (CMIS).

CMISE

See Common Management Information Service Element (CMISE).

CMOS

Complementary Metal-Oxide Semiconductor. High-speed, low-power solid state component.

CMU

Master Clock (module)

CNM

Customer Network Management

CO

See Central Office (CO).

COA

Craft Orderwire and Alarms

Code Division Multiple Access (CDMA)

A form of multiplexing where the transmitter encodes the signal using a pseudo-random sequence that the receiver also knows and can use to decode the received signal. Each different random sequence corresponds to a different communication channel. (CDMA is also referred to as "spread spectrum.") Motorola uses CDMA for digital cellular phones.

Code Violation

Violation of a coding rule; for example, the Alternate Mark Inversion (AMI) code is corrupted by a Bipolar Violation (BPV).

Coding Violation (CV)

1. A violation in the coding of a signal over a digital circuit; the count of BIT-8 errors. See also Code Violation.
2. Checksum Value. See also Checksum.
3. Combined Voice. Old Bell-Speak for single-line phone.

COM

Communications port (usually COM1 or COM2, referring to communications port #1 or port #2 on a personal computer [PC]).

Command

Language

A set of procedural operators with a related syntax to indicate the functions to be performed by an operating system.

Commands

Short-term maintenance controls such as loopback and manual switch.

**Common
Management
Information Protocol (CMIP)**

The Network Management (NM) standard for Open Systems Interconnection (OSI) networks. NM information services are used by peer processes to exchange information and commands for the purpose of NM. CMIS defines a message set and the structure and content of the messages such that they might be used by "open" systems; can exchange information between an application and a management station; is similar to Simple Network Management Protocol (SNMP), but more powerful.

**Common
Management
Information
Services (CMIS)**

Network management information services are used by peer processes to exchange information and commands for network management. CMIS defines a message set and the structure and content of the messages such that they might be used by "open" systems. In concept, it is similar to Simple Network Management Protocol (SNMP), but more powerful and more complex.

**Common
Management
Information
Service Element (CMISE)**

CMISE functionality is provided by Common Management Information Protocol (CMIP) in transporting network management information. Bellcore-specified protocol for communication between network elements. A wireless telecommunications term.

Communication Processor Card (CPC)

Provides interfaces to Operations Support System (OSS) and Transaction Language (TL) and to Data Communications Channel (DCC), Local Communications Network (LCN), and X.25 networks; operates Communication Interface Unit (CIU) shelf.

Complex Programmable Logic Device (CPLD)

A programmable circuit similar to Field-Programmable Gate Array (FPGA), but generally on a smaller scale; invented by Xilinx Inc. See also Field-Programmable Gate Array (FPGA).

Computer Control Language (CCL)

English-like query language based on COLINGO, for IBM 1401 and IBM 1410.

Concatenated Synchronous Transport Signal Level N (STS-Nc)

An STS-N Line layer signal in which the STS envelope capacities from the N STS1s have been combined to carry an STS-Nc synchronous payload envelope (SPE), which must be transported as a single entity, not as several separate signals.

Concatenated Virtual Tributary (VTx-Nc)

A set of Virtual Tributaries (VTs) in which the VT envelope capacities from N VTxs have been combined to carry a VTx-Nc, which must be transported as a single entity, not as several separate signals.

Concatenation

A Synchronous Optical Network/Synchronous Digital Hierarchy (SONET/SDH) mechanism for allocating contiguous bandwidth for transport of a payload greater than Synchronous Transport Signal Level 1 (STS-1) (the electrical equivalent Optical Carrier Level 1 [OC-1], 51.84 Mb/s; T-3 plus Synchronous Optical Network (SONET) overhead). By using concatenation pointers, multiple OC-1s can be linked end-to-end to provide contiguous bandwidth. The same approach is used in higher SONET OC levels. Concatenation applications include bandwidth-intensive video and high-speed data. See also Synchronous Optical Network (SONET) and Synchronous Digital Hierarchy (SDH).

Condition Type

Reported fault or event type

Configured size

System configuration size as defined in database

Configuring

The act of defining the features to be contained on a module, shelf, or system.

CONP

Connection-Oriented Network Protocol. OSI protocol that provides connection-oriented operation to upper-layer protocols.

CONS

Connection-Oriented Network Service

Controlled

Environmental Vault (CEV)

An underground room that houses electronic and/or optical equipment under controlled temperature and humidity.

Control Menu

Located in the upper-left corner of each windows screen; contains commands that change the size and position, and close the application window. Double-clicking the mouse can close the application window. Control menu commands are also accessible through the keyboard.

Control Points

Relay contact closures provided by the system so that it may cause electrical control circuits exterior to itself to be activated under software control.

Coral Common LISP (CCL)

A dialect of LISP Processing (LISP) language defined by a consortium of companies brought together in 1981 by the Defence Advanced Research Projects Agency (DARPA). Common Lisp is a large, complex language; it features lexical binding, data structures using destruct and shift, closures, multiple values, types using declare and a variety of numerical types.

CORBA

Common Object Request Broker Architecture

Correlation Tag (CTAG)

All commands issued to the network element using TL1 are given a correlation tag; response to the command has the same correlation tag.

COSE

Common Open System Environment

Country Code (CC)

Identifies the country of the called party at an international telephone number; CC can be one, two, or three digits. An international phone number consists of the CC and the Nationally Significant Number (NSN) of up to 11 digits (for a total v12 digits) until December 31, 1996, after which the CC stays at up to three digits and the NSN goes to up to 14 digits (for a total v15 digits).

CPC

See Communication Processor Card (CPC).

CPD

Circuit Provisioning Data

CPE

1. C-bit Parity Error
2. Customer Premise Equipment

CPI

CPI

See Card Presence Indicator (CPI).

CPLD

See Complex Programmable Logic Device (CPLD).

CPORT, C port

Control Port that interfaces printers, terminals, and X.25 communications links

CPR number

Continuing Property Record number

CPU

Central Processing Unit (module)

CR

1. Critical. See also Alarm/Condition Codes.
2. Change Request

CRC

See Cyclic Redundancy Check (CRC).

Craft Orderwire Alarms (COA)

A communication part on a network element.

CRI

Critical alarm. See also Alarm/Condition Codes.

Cross-Connect

Connection point for DSX transmit/receive signals with defined characteristics.

CRS

Cross-connect

CRT

1. Cathode Ray Tube
2. Customer Response Team

CS

Center Stage.

CSDB

Command Security DataBase

CSES

Consecutive Severely Errored Second

C-source

A method of protecting against power supply failure by applying the output of redundant units to a common bus via diode-coupling.

CSU

1. Channel Service Unit
2. Customer Service Unit

CSX

Compact SONET Cross-Connect System

CT

Craft Terminal

CTAG

See Correlation Tag (CTAG).

CV

See Coding Violation (CV).

CVL

Coding Violation count, Line. See Coding Violation (CV).

CVP

Coding Violation count, Path. See Coding Violation (CV).

CVS

Coding Violation count, Section; detected by section parity monitoring. See also Parity Check and Coding Violation (CV).

Cyclic Redundancy Check (CRC)

A number derived from a block of data and stored or transmitted with the data to detect any errors in transmission; similar to a checksum, but more complicated. A CRC is often calculated by adding words or bytes of the data. The receiving card recalculates the CRC from the data received and compares it to the value originally transmitted; if the values are different, it indicates a transmission error. The CRC is called redundant because it adds no significant information to the transmission itself.

D

D&E

A particular type of communications terminal device per RS-232 standards.

DAC

Digital-to-Analog Converter

DAT

Digital Audio Tape

Database Change (DBCHG)

When the network element database is changed as a result of a user command, an autonomous DBCHG report is generated to notify users of the change. These messages are used to keep all users synchronized to the actual database contents.

Data

Communications Channel (DCC)

Synchronous Optical Network (SONET) overhead reserved for communication between network elements. The channel transports signals from one data processing device location to another data processing device location.

Data

Communications Equipment (DCE)

The devices and connections of a communications network that connect the communication circuit between data source and destination (the Data Terminal Equipment [DTE]). A modem is the most common DCE. Before data can be transmitted over a modem, the Data Terminal Ready (DTR) signal must be active. DTR tells the DCE that the DTE is ready to transmit and receive. DCE and DTE are usually connected by an RS-232 serial line. It is necessary to distinguish these two devices because their connectors must be wired differently if a "straight-through" cable (pin 1 to pin 1, pin 2 to pin 2, etc.) is used. DCE should have a female connector and should transmit on pin two and receive on pin three. Many modems are "DTE" according to the original standard.

Data Link (DL)

A Data Link Control Identifier (DLCI) is a channel number is attached to data frames to tell the network how to route the data.

Datapath Module

A matrix module, sync module, or Digital Signal Module (DSM). These modules/cards cannot communicate with an IFS101 Interface Server installed in the multiflex shelf and strapped as master (MIFS) module because they are not on the Internal Local Area Network (ILAN) bus.

Dataphone Digital Service (DDS)

The first private-line digital service offered by AT&T, with data rates typically at 2.4, 4.8, 9.6, and 56 kilobits per second. DDS is now part of AT&T Accunet family of services. Most Local Exchange Carriers (LECs) and IntereXchange Carriers (IXC) offer similar services.

dB

See Decibel (dB).

Data Terminal Equipment (DTE)

A device acting as the source and/or destination of data and controlling the communication channel; includes terminals, computers, protocol converters, and multiplexers; usually connected by means of an RS-232 serial line to Data Communication Equipment (DCE), typically a modem. It is necessary to distinguish these two device types because their connectors must be wired differently if a "straight-through" cable (pin 1 to pin 1, pin 2 to pin 2 etc.) is used.

DB

Database

DBCHG

See Database Change (DBCHG).

dB/km

Decibels per kilometer

dBm

See Decibel (dBm). See also Decibel (dB).

DC

Drop-and-Continue

DCC

See Data Communications Channel (DCC).

DCE

1. See Data Communication Equipment (DCE).
2. Data Circuit-terminating Equipment

DCF

Dispersion Compensation Fiber

DCM

Dispersion Compensation Module

DCN

Data Communications Network

DCP

Data Collection Processor

DCS

Digital Cross-Connect System

DDFS

Digital Direct Frequency Synthesizer

DDS

1. See Digital Data Service (DDS). The class of service offered by telecommunications companies for transmitting digital data as opposed to voice.

2. Digital Data System

3. See Dataphone Digital Service (DDS).

DEACT

Deactivate

Decibel (dB)

A unit for measuring the power of a sound or strength of a signal; expressed as the ratio of two values. Power in telecommunications circuits is so low that it is normally measured in milliwatts. However, the milliwatt is not a convenient way to express differences in between-circuit power levels. Voice frequency circuits are designed around the human ear, which has a logarithmic response to changes in power. So the decibel, which is a logarithmic rather than a linear measurement, is used as a measure of relative power between circuits or transmission levels. A change in level of 1 dB is barely perceptible under ideal conditions. Increases or reductions of 3 dB result in doubling or halving the power in a circuit. The corresponding figure for doubling or halving voltage is 6 dB.

Decibel (dBm)

A logarithmic expression of the ratio of a given power level relative to 1 milliwatt.

Demux

Demultiplex (-er, -ing)

Dense Wavelength Division Multiplex (DWDM)

A high-speed version of Wave Division Multiplex (WDM); increases capacity of Synchronous Optical Network (SONET) fiber-optic transmission systems through the multiplexing of multiple wavelengths of light; uses optical channel spacing on the order of 1.6 nm (200 GHz) and is compatible with the International Telecommunications Union (ITU) channel plan. Wavelength tolerance for these channels is ± 0.3 nm. This permits as many as 16 channels in the optical band from 1530 nm to 1560 nm. A SONET term. See also Narrow-Band Wavelength Division Multiplex (NB-WDM).

DFB-SLM

Distributed Feedback - Single Longitudinal Mode (laser diode)

DG

Drop Group

DGN

Diagnostics

DHCP

Dynamic Host Configuration Protocol

Digital Data

Service (DDS)

The class of service offered by telecommunications companies for transmitting digital data as opposed to voice.

DID

Directory Identifier

DIG

Digroup

DIF

Desktop Integration Framework

Direct Entry

Function that enables users to interact with a network element in TL1 form.

Disk Operating System (DOS)

Refers to MS-DOS and to PC-DOS, except when noting features that are unique to one or the other.

Distributed Queue Data Bus (DQDB)

A multiplexing/switching technique similar to Asynchronous Transfer Mode (ATM) that uses IEEE 802.6 PLCP.

Distributed Queue Dual Bus (DQDB)

The Metropolitan Area Network (MAN) access technique defined by IEEE 802.6 standard for Switched Multimegabit Data Service (SMDS); based on Queued Packet Synchronous Exchange (QPSX); operates by maintaining a queue at each station to determine when the station may access its dual buses, which provide bidirectional access to its dual buses. Dual buses provide bidirectional transmission between originating and terminating stations with excellent, end-to-end congestion control ensured. DQDB consists of two unidirectional buses connected as an open ring (for example, each bus is not directly interconnected). It provides for full-duplex operation between any two nodes. See also Asynchronous Transfer Mode (ATM).

Dispersion

Dispersion is the process whereby optical pulses are widened as they travel along an optical fiber. It is caused by the different wavelength components of a light signal of finite spectral width traveling down the fiber at different velocities. The effect is a pulse at the terminating end of a fiber that is wider than the original pulse that was transmitted. If the amount of widening is excessive the individual pulses will not be distinguishable by the receiver. See also Chromatic Dispersion and Polarization Mode Dispersion (PMD).

DL

See Data Link (DL).

DLMAP

Data Link Map

DLT

Download Tool

DMA

Direct Memory Access

DMAC

1. Direct Memory Access Control
2. Direct Memory Access Controller

DMACS

Distributed Monitoring And Control System (an AT&T system definition standard).

DMI

Drop Module Interface

DNM

Distributed Network Management

DNS

Domain Naming System. Used in the Internet for translating names of network nodes into addresses.

Domain

According to Management Information System (MIS) use, domain is the part of a computer network in which data processing resources are under common control. In Microsoft™ networking, a domain is a collection of computers sharing a common domain database and security policy that is stored on a Windows NT™ server domain controller. Each domain has a unique name.

DOS

Disk Operating System

DOW

Digital Orderwire

DP

Datapath

DPLL

Digital Phase-Locked Loop

DPRAM

Dual-Port Random Access Memory

DQDB

1. Digital Queue Dual Bus
2. See Distributed Queue Data Bus (DQDB).
3. See Distributed Queue Dual Bus (DQDB).

DRAM

Dynamic Random Access Memory

Drop

Individual connections (sometimes called nodes) on a multipoint (also called multidrop) circuit.

Drop Side Signal

A traffic path connecting to the tributary side of the network element; path can be electrical (such as DS3 or STS1) or optical (such as OC3 or OC12) and can include Synchronous Optical Network (SONET) overhead information/access. Specific capabilities and format are product and feature dependent.

DS

Defect Second

DSLAM

Digital Subscriber Line Access Multiplexer

DS0, DS-0

Digital Signal, level 0; pronounced “D-S zero;” a DS0 is 64,000 bits per second (b/s) (64 kilobits), equal to one voice conversation digitized under Pulse Code Modulation (PCM). Twenty-four DS0s (24 64 kb/s) equal one DS1, which is T-1 or 1.544 million b/s.

DS0 Path-Terminating Equipment

(DS0 PTE)

Network elements that multiplex/demultiplex the DS0 channels. DS0 PTEs interpret and either modify or create the DS0 signaling information necessary to transport the DS0 channels.

DS0 PTE

Digital Signal, level 0 Path-Terminating Equipment

DS1

Digital Signal level 1 (1.544 Mb/s). Can contain 24 DS0s.

DS1CP

Connectorized input/output panel for DS1 terminations.

DS1WW

Wire-wrap input/output panel for DS1 terminations.

DS2

Digital Signal level 2 (6.312 Mb/s). Can contain 96 DS0s.

DS3

Digital Signal, level 3. Bell System-compatible 44.736 Mb/s digital signal format. Refer to AT&T Compatibility Bulletin 119 (CB-119) (formerly Technical Advisory 34); (T3 equivalent). Can contain 28 DS1s. Refer to ANSI T1LB-117 for details.

DS4NA

Digital Signal Level 4 North America

DSB

DCC Server Board

DSF

Dispersion-Shifted Fiber

DSI

DS1 Interface (module)

DSK

1. Disk unit
2. Hard Disk Drive (module)

DSM

1. Digital Signal Module. Modules that support optical facilities include OC192, OC48, OC12, OC3, and DS3.
2. Distributed System Management

DSP

1. Digital Signal Parameter
2. Digital Signal Processing
3. Domain-Specific Port

DSX

Digital Signal Cross-connect

DSx

Digital Signal of an unspecified rate

DSX-1

Digital Signal, level 1 cross-connect

DSX-3

Bell System-compatible Digital Signal cross-connect point for equipment that generates or uses DS3 signals. This point has defined waveshapes and voltage levels, in accordance with American National Standard T1.102-1987 (formerly AT&T Compatibility Bulletin 119).

DTAU

Digital Test Access Unit

DTE

See Data Terminal Equipment (DTE).

DTMF

Dual-Tone Multifrequency

Duplex (DX)

Simultaneous communication in both directions between two locations.

DUS

Do not Use for Synchronization

DWDM

See Dense Wavelength Division Multiplex (DWDM).

DX

Duplex configuration. See Duplex (DX).

Dx, DEMUX

Demultiplex direction, the tributary output signal, arriving on the optical carrier and leaving through the tributary (electrical) outbound data stream.

DXC
Digital Cross-connect Control

E

E2A
An AT&T alarm and control interface specification.

EB
Errored Blocks

EBC
Errored Block Count

EC
Electrical Container

EC1
1. Electrical Carrier, level 1
2. Electrical Connection Level 1, STS-1 line and section object entity (electrical STSX-1)

ECL
Emitter-Coupled Logic

EDFA
Erbium-Doped Fiber Amplifier

EDFFA
Erbium-Doped Fluoride Fiber Amplifier

EDSX
Electronic Digital Signal Cross-Connect

EEPROM
Electrically Erasable Programmable Read-Only Memory

EF
Environmental Factor

EFD
Event Forwarding Discriminator

EIA
Electronic Industries Association

Element
Port number

ELF
Event Log File

ELM
Event and Log Manager

EM

Element Management

EMA

Element Management Application

Embedded Facility

A lower level (for example, DS1) digital signal transported in a higher level signal. Examples are a DS1 signal embedded in a DS3, or a DS3 embedded in an STS-1 facility.

EMI

Electromagnetic Interference

EML

1. Element Management Layer
2. Equipment Management Layer

EMS

Element Management System

End System (ES)

A system where an Asynchronous Transfer Mode (ATM) connection is terminated or initiated. An originating ES initiates the ATM connection; terminating ES terminates the ATM connection. Operations, Administration, and Maintenance (OAM) cells can be generated.

End System

to Intermediate System (ES-IS)

The Open Systems Interconnection (OSI) protocol used for router detection and address resolution.

ENE

End Network Element

Entity

Refers to anything within XXX that has a service state associated with it; this includes equipment and facilities.

EOB

Electrical-Optical Converter (module)

EOC

1. Electrical-Optical Converter (shelf)
2. Embedded Operations Channel; implies Section Overhead.
3. Extended Operating temperature Condition

EOL

End of Life

EOCL

Embedded Operation Channel failure, Line

EP3

DS3 Interface (module)

EPROM

Erasable Programmable Read-Only Memory

Equipment (EQPT)

Electronic or mechanical devices at network nodes where end users are connected to communications network

Equipped size

Total amount of hardware equipped within some maximum port capacity. Equipped size must be less than or equal to configured (or wired) size.

Equipping

The act of installing a plug-in module into a shelf and declaring use of that module to the system. See also In Service (IS) and Out of Service (OOS).

EQPT

See Equipment (EQPT)

Erbium-Doped Fiber Amplifier (EDFA)

The dominant method for signal amplification in long-haul lightwave transmission systems. EDFAs differ from the normal method regenerative or electro-optic repeaters in that light does not have to be converted to an electrical signal, amplified, then converted back to light. EDFAs are not frequency dependent, so they allow bandwidth upgrades (within) limits without replacing the entire transmission systems. Undersea transmission systems use EDFA technology.

Errored Second (ES)

A second during which a Coding Violation (CV) occurs.

ES

1. End Stage
2. See Errored Second (ES).
3. See End System (ES).

ES1

STS-1 Interface (module)

ESA

DS1 Adapter (module)

ESCP

Errored Seconds-CP-bit Path

ESD

Electrostatic-Sensitive Device. A circuit component, such as CMOS integrated circuit, that is prone to damage from static electricity. See also *ESS*.

ESF

See Extended Superframe (ESF).

ESF

1. Extended Superframe Format. DS1 signal framing format consisting of 24 frames. Each frame contains a payload of 24 channels plus 1 overhead bit.
2. See also Extended Superframe (ESF).

ESF-FDL

Extended Superframe Format-Facility Data Link. A 4 kb/s data link embedded in the DS1 overhead bits.

ES-IS

See End System to Intermediate System (ES-IS).

ESL

Errored Second, Line. See Errored Second (ES)

ESP

Errored Second, Path. See Errored Second (ES)

ESS

1. Electrostatic-Sensitive Device. A circuit component, such as CMOS integrated circuit, that is prone to damage from static electricity. Also *ESS*.
2. Errored Second, Section. See Errored Second (ES)

ESW

Excessive Switching

ETSI

European Telecommunication Standards Institute

EXBER

Excessive Bit Error Rate. See Bit Error Rate (or Ratio) (BER) and Superframe (SF).

EXNFF

Excessive Number of Failed Facilities

Expansion. Increase of system switching capacity by addition of hardware and/or software

Expansion

Increase of system switching capacity by addition of hardware and/or software.

Extended Superframe (ESF)

One of two possible framing patterns for a DS1 signal. ESF has an extra channel that can pass synchronization messages; the Superframe (SF) cannot.

EXZ

Excessive Zeros; a performance primitive for DS1 facilities.

Eye Diagram

A graphic presentation formed by the superimposition of the waveforms of all possible pulse sequences.

F

F3

Fractional T3

Facility

1. The uni-direction external data interfaces with Alcatel-Lucent equipment; possible facilities include OC-M, STS-N, STS-Nc, and DS_n; each has an associated direction to distinguish between transmit and receive.

2. Lines and paths between network elements and connecting network element to DS3 network

Frame Data Link (FDL)

A message channel in the overhead of a DS1 Extended Superframe (ESF) signal that can relay clock-quality information.

FACTERM

Facility/Circuit TERMination equipment failure

FAD

1. Facility Access Digroup. Test access port component. One FAD is associated with equipment side of connection and the other FAD is associated with facility side of connection.

2. Functional Access Domain

FBE

Frame Bit Error. An error on an incoming DS3 signal detected and reported by the performance monitor.

FC

Failure Count

FCC

Federal Communications Commission

FCP

Failed Count-Path

FC/PC

A specific type of fiber-optic cable connector.

FDL

1. Facility Data Link

2. See Frame Data Link (FDL).

FDDI

Fiber Distributed Data Interface

FDLPM

Facility Data Link Performance Monitoring

FDL

Facility Data Link. An overhead channel in DS1 ESF framing format providing reliability information

FDM

See Frequency Division Multiplexing (FDM).

FDN

Fully Distinguished Name

FE

Far-End

FEAC

Far-End Alarm and Control. Channel bit used in C-bit formatting for status and control communications.

FEBE

Far-End Block Error. Channel bit used in C-bit formatting for performance monitoring event.

FEC

Forward Error Correction

FEND

Far End

FERF

Far-End Receive Failure

FES

Frame Errored Seconds

FFP

Fast Facility Protection

FFT1

Fast Facility Protection Threshold 1

FFT2

Fast Facility Protection Threshold 2

FFT3

Fast Facility Protection Threshold 3

FG, FGND

Frame Ground

FI

Fault Isolation

Fiber Optic Cable

The core of the fiber optic cable is made of very pure glass; it is surrounded by four protective layers, given here from the core out: cladding, buffer, dielectric strength member, and the polyvinyl chloride (PVC) subunit jacket.

FIC

Frame Identification Code. Identifies the DS1 within a building.

Field-

Programmable Gate Array (FPGA)

Used on some cards to modify hardware operation through software, rather than physically changing the hardware on the card; logic network can be programmed into the device after its manufacture. An FPGA consists of an array of logic elements. Most FPGAs are reprogrammable because their logic functions and interconnect are defined by Random Access Memory (RAM) cells; others can be programmed only once, retaining programming permanently. FPGAs have enabled development of logic emulators. See also Complex Programmable Logic Device (CPLD).

FIFO

First In, First Out

FIT

Failures In Time: 1 billion hours (Failures per billion hours).

Fixed Stuff

(R-Bits/Bytes)

Fixed stuff (R) bits and bytes compensate for the differences between the bandwidth available in the STS1 and Virtual Tributary (VT) synchronous payload envelopes and the bandwidth required for the actual payload mappings (for example, DS1, DS1C, DS2, DS3, etc.). They facilitate interworking with existing transmission systems or allow interworking between fixed and floating VTs. R-bits and bytes have no defined value. The receiver ignores the value of these bits/bytes (except for BIP-8 calculation/verification).

FLEXCOM

A trademark of Bellcore.

FLT

Fault

FM

Fault Manager

FMBIT

Parity monitoring. Monitors total path performance and provides a true indication of errors from point of inception to point of monitoring.

Format

Refers to basic structure and arrangement or order of elements in a command or data.

FP

Fabry-Perot (laser diode)

FPE

Frame Parity Error

FPI

Fast Protection Interrupt

FPT

Full Pass-Through

FPGA

1. Fused Programmable Gate Array
2. See also Field-Programmable Gate Array (FPGA).

FP-MLM

Fabry-Perot-Multilongitudinal Mode (laser)

Frame

A sequence of bits preceded by or followed by a valid framing bit

Frame ground

The ground reference provided by the metal rack structure; also referred to as *rack ground*. Tied to CO ground bus at top of each rack.

FRCD

Forced

Frequency Division Multiplexing (FDM)

The simultaneous transmission of multiple separate signals through a shared medium (such as a wire, optical fibre or light beam) by modulating, at the transmitter, the separate signals into separable frequency bands, and adding those results linearly either before transmission or within the medium. While combined, all signals can be amplified, conducted, translated in frequency, and routed toward a destination as a single signal, resulting in economies (the motivation for multiplexing). Apparatus at the receiver separates the multiplexed signals by frequency passing or rejecting filters and individually demodulating the results appropriately for the modulation scheme used for that band or group. Bands are joined to form groups, and groups can then be joined into larger groups, a technique is common only in large and sophisticated systems and is not a necessary part of FDM. Transmitters and receivers need not be close to each other.

FSBE

Frame Synchronization Bit Error

FSS

First Stage Switch

FTP

File Transfer Protocol. An IP-based file transfer protocol.

FTS

Fiber Transmission System

Full Duplex

1. Independent, simultaneous communication in both directions between two locations.
2. Standard 2-way connection.

Full-Duplex

Transmission

1. Simultaneous two-way independent transmission in both directions. Compare with Half-Duplex Transmission.
2. Describes terminals in the echoplex modem.

FWHM

Full Width, Half Maximum. A measure of the spectral width of the optical signal.

FWK

Framework (ALMAP)

G

GAP

Generic Alarm Proxy

Gateway

Communications Functions

Functions to facilitate operations communications between two communicating entities across dissimilar subnetworks. Examples include concentration, message routing and relaying (Network Layer), and application layer protocol conversion and/or message translation. See also Mediation Functions.

Gb, Gb/s

Gigabits, Gigabits per second

GB, GB/s

Gigabytes, Gigabytes per second

GC

Generic Component

GDL

Green Data Link

GDMO

Generic Description of Managed Objects

Ge

Germanium

GEM

Generic Element Manager

Generic upgrade

Software update from one release to the next. Releases must not be skipped when performing a generic upgrade.

Gigabit Ethernet (GigE)

Input conditioning performed to map Ethernet frames into SONET payload structures.

GigE

See Gigabit Ethernet (GigE)

GLO

Green Lockout

GM

General Market

GMT

Greenwich Meridian Time

GND (or Gnd)

Ground

GNE

Gateway Network Element

GOS

Grade of Service

**Graphical User
Interface (GUI)**

This interface supports applications that consist of a series of rectangular presentation regions called windows. Each window displays another application.

Grooming

The process of moving traffic from one point to another.

Growth

Increasing system port capacity

GTI

Generic Transport Interface

GTIO

Optical Generic Transport Interface

GTP

General Telemetry Processor

GTS

Generic Test System

GUI

See Graphical User Interface (GUI).

H

HAL

Historical Alarm List

Half duplex

Standard 1-way connection

**Half-Duplex
Transmission**

A circuit designed for data transmission in both directions, but not at the same time. Telex is an example of a half-duplex system, as is speaking on with most speaker-phones. Compare with Full-Duplex Transmission.

HALog

Historical Alarm Log

HDB

Hard Disk Backup

HD Repeater

High Density Repeater

HDLC

High-level Data Link Control. Used on the bus that connects the Shelf Processor Card (SPC) with its Datapath (DP) cards on the same shelf.

HDLC-NRC

High-level Data Link Control-Normal Response Control

HDLC-NRM

High-level Data Link Control-Normal Response Mode

Head End

The point where the line overhead is inserted. (Tail end describes the point where the line overhead is terminated.) A central control device required within some Local Area Network/Area Network (LAN/MAN) systems to provide such centralized functions as remodulation, retiming, message accountability, contention control, diagnostic control, and access.

HIF

High-speed InterFace

HLD

High-Level Design

HLDOVER

See Holdover.

HMI

Human Machine Interface

HMU

23 Muldem (module)

HOD

Hour of Day

HPSC

High-Performance System Controller

HRC

Hekimian React Compatibility

Holdover

A mode in which an oscillator that was previously tracking a reference attempts to maintain the last-known frequency instead of continuing to track. Transition to Holdover could occur for a variety of reasons, including failure on a reference or a manual switch.

HP®

Hewlett Packard

HP OV

HP Open View

HP OV DM

HP Open View Distributed Management

HS

High Speed

HSS

High-Speed Shelf

Hz

Hertz

I

IBFEC

In-Band Forward Error Correction

ICL

Interface Control Link. An RS-485 signal level bus for communication between master and slave configurations from a satellite processor multitapped transmission media; link speed is 6.25 MHz; consists of receive data, transmit data, clock, bus enable and copy active.

ICL(d)

Interface Control Link (differential). An RS-485 signal level bus for alarm register read/write from the RSP and PDU: multitapped transmission media; link speed is 6.25 MHz;1 consists of receive data, transmit data, clock, and bus enable.

ICM

Intelligent Communications Module (circuit pack)

IDL

Interface Definition Language

IDMA

Independent Direct Memory Access

ICS

Item Change Status

Icon

Single graphic element such as a circle or rectangle or other picture.

ID

Identification

IDE

Integrated Drive Electronics

ID/NSAP

Identification/Network Service Access Point

IEC

1. Incoming Error Count
2. International Electrotechnical Commission

IEEE

Institute of Electrical and Electronics Engineers

IFS

InterFace Server module

IGFET

Insulated Gate Field Effect Transistor

IIC

Inter-Integrated Circuit

IID

Image ID

I-LAN

Intra-System 10BASE-T Local Area Network

ILAN

Internal Local Area Network (internal to the Network Element [NE]); the bus used between the Interface Server Module (IFS) and shelf processor cards in NE.

IM

1. Information Model
2. Information Manager

IMAGE

Alternate Map Storage

IMP

Integrated Multi-protocol

INCFAD

Incoming Failure because of Facility (or Fading)

INE

1. Intelligent Network Element
2. Intermediate Network Element

Information

Processing

Functions

Functions, centralized in a subnetwork, to perform common application processing and management for Network Elements (NEs) within subnetwork. Example NE functions include performance data storage and failure condition thresholding for alarm reporting. Example management functions include migration of “OS-like” functions out to the network for subnetwork trouble sectionalization, configuration (for example, cross-connection) management, and Customer Network Management (CNM). See also Mediation Functions.

InGaAs

Indium Gallium Arsenide

InGaAsP

Indium Gallium Arsenide Phosphorus

Input/Output (I/O)

Two of the three computer functions; the third is processing. I/O describes the interrelated tasks of providing information to the computer and providing the results of processing to the user. I/O devices include keyboards (input) and printers (output). A disk drive is an input and an output device because it provides information to the computer and receives information from the computer.

In Service (IS)

An equipment module is available for use by the system. (It may be online or offline.) An equipped module is either IS or Out of Service (OOS).

In-Service Growth

A feature that enables service providers to install one optical channel initially, then upgrade to additional optical channels or a mix of data rates. Additional modules may be added one at a time while the system is in service.

INT

Internal

Integrated Services Digital Network (ISDN)

ISDN is a special telephone line that allows data to be transmitted using end-to-end digital connectivity. (Data transmits digitally directly from sender to receiver.) Two basic types of ISDN: BRI (144,000 bits per second [b/s] designed for the desktop) and PRI (1,544,000 b/s, designed for telephone switches, computer telephony, and voice processing systems). Neither ISDN Basic Rate Interface (BRI) nor ISDN Primary Rate Interface (PRI) is a standard service, though there are several “standard” configurations. A difficult service to run, ISDN requires a special ISDN modem (a terminal adapter [hardware] that allows the sending and receiving of digital signals over ISDN lines. Typical modems convert digital signals from the computer into analog signals that can be sent over copper cables. But an ISDN terminal adapter transmits only digital data.

Interleave

1. Transmission of pulses from two or more digital sources in time-division sequence over a single path.
2. A data communication technique, used in conjunction with error-correcting codes, to reduce the number of undetected error bursts. In the interleaving process code symbols are reordered before transmission so that any two successive code symbols are separated by $l-1$ (l is called the degree of interleaving). Upon reception, interleaved code symbols are reordered into their original sequence, effectively spreading or randomizing errors (in time) to enable more complete correction by a random error-correcting code.
3. Refers to the way a computer writes to and reads from a hard disk.

Intermediate Reach (IR)

Refers to optical sections from a few kilometers (km) to approximately 15 km; an AT&T Synchronous Optical Network (SONET) term.

Intermediate System (IS)

Refers to a system that originates and terminates traffic, and forwards traffic to other systems; an Open Systems Interconnection (OSI) term.

Intermediate System to Intermediate System (IS-IS)

An Open Systems Interconnection (OSI) link-state hierarchical routing protocol, based on DECnet Phase V routing, whereby intermediate systems (routers) exchange routing information based on a single metric to determine network topology.

Internet Protocol (IP)

Part of the Transmission Control Protocol/Internet Protocol (TCP/IP) family of protocols describing software that tracks the Internet address of nodes, routes outgoing messages, and recognizes incoming messages; used in gateways to connect networks of Open Systems Interconnection (OSI) network Level 3 and above. See also Internet Protocol (IP) Address and Transmission Control Protocol/Internet Protocol (TCP/IP).

Internet Protocol (IP) Address

A unique, 32-bit number for a specific transmission control protocol/internet protocol (TCP/IP) host on the Internet; normally printed in dotted decimal form (for example, 128.126.50.224). When a domain is assigned a group of numbers by the Internet central registry, it can house one or several domains and/or hosts. Some IP addresses are reserved for broadcasts in respective domains. See also Domain.

I/O

See Input/Output (I/O).

IOB

I/O Optical Converter (module)

IOC

Input/Output Conditioner

IOO

OS-OS Interface

IP

1. In Progress
2. See Internet Protocol (IP).

IPB

Internal Protect module. A space matrix that provides a cross-connect between the continuing path of the failed DS3/STS-1 and the protection path from the DS3/STS-1 interface protection circuit pack.

IPC

Interprocess Communications

IPE

In-Service Parameter Editing

IPU

Interface Processing Unit (module)

IR

See Intermediate Reach (IR).

IRB

Inter-Rack Bus

IRO

Interrack Optics

IS

1. See In Service (IS).
2. See Intermediate System (IS).

IS-ANR

In Service-Abnormal

ISDN

See Integrated Services Digital Network (ISDN).

ISID

1. Idle Signal Identifier
2. Idle Signal Identification

ISL

Interprocessor Sanity Link. Control interface between duplex processor modules of cross-connect control system (that is, IPUs, APUs, or CPUs)

IS-IS

See Intermediate System to Intermediate System (IS-IS).

ISLTD

Isolated, fully

IS-NR

In Service-Normal

ISO

International Standards Organization

ISU

In-Service Upgrade

ITAG

Informational Message Tag

ITB

DS3/STS-1 Test Board (module)

ITS

Integrated Test System; a Bell OS

ITU

International Telecommunications Union (replaces CCITT)

ITU-T

International Telecommunications Union Telecommunications

IW

Insertion Word

J

JFET

Junction Field Effect Transistor

Jitter

Relative phase change between data time slots and clock (timing) pulses. Results in bit errors and, in voice circuits, noise in telephone circuits. Jitter is cumulative and is primary limitation to maximum system length, including terminals and repeaters, of a digital transmission system.

K

KAM

Keep Alive Message

kb/s

Kilobits per second

kHz

KiloHertz

km

Kilometers

L

L1

Level 1

L2PE

Level 2 Processor Element

L3PE

Level 3 Processor Element

L3PE2

Level 3 Processor Element II

LADM

Linear 1:1 Add-Drop Multiplexer. See Linear Add-Drop Multiplexer (LADM).

LAN

Local Area Network

LANCE

Local Area Network Controller for Ethernet

LAPB

Line Access Procedure, Balanced

LAPD

Link Access Procedure, D-channel

LB

Long Band (LB). See also Conventional-Band (C-Band).

LBCL

Laser Bias Current, Line

LBO

See Line Buildout (LBO).

LCI

Logical Channel Identifier

LCN

1. Local Communications Network, a Local Area Network (LAN).

2. Logical Channel Number

LDCC

Line Data Communications Channel. See also Data Communications Channel (DCC).

LDR

Line Driver/Receiver (ECI or DS3)

LED

Light-Emitting Diode

LD

Line Driver

LDB

Loop Detection Buffer

LDAP

Lightweight Directory Access Protocol

LDCC

Line Data Communications Channel

LEC

Local Exchange Carrier

Level translator

Provides interfaces from the Administrative Processor to external devices or communication links. See also LTx.

LEFF

Laser Efficiency

LEMA

Legacy Element Management Application

LEMSDXC

Legacy Element Management Application—Digital Cross-connect

LEMSNT

Legacy Element Management Application—SONET

LF

Loop Filter

LFACS

Loop Facilities Assignment and Control System; a Bell OS

LG

Line Group

LIF

Low-speed Interface

Light Power

Received

Normalized (LPRN)

The optical power level as an integer percentage of the calibrated optical power level. The calibrated optical power level is a “snapshot“of the received power level at a user-requested point in time.

Limited mode

System operating mode that allows access to a limited number of commands. It is primarily used for database restoration.

Line

A transmission medium, together with the associated Line-Terminating Equipment (LTE), required to provide the means of transporting information between two consecutive line-terminating network elements: One originates the line signal, and the other terminates the line signal. In SONET, the line envelope is a subset of the section envelope.

Line Alarm

Indication Signal (AIS) Code

A code generated by Section-Terminating Equipment (STE) upon loss of input signal, loss of frame, or equipment failure. Line AIS signal maintains operation of downstream regenerators and prevents generation of unnecessary alarms. At the same time, data and orderwire communication is retained between the regenerators and downstream Line-Terminating Equipment (LTE).

Line Buildout (LBO)

Equalization pad or artificial line network.

Line Group

Group of Synchronous Optical Network (SONET) signals at an Add/Drop Multiplexer (ADM) connection.

Line Side Signal

A signal suitable for transmission over outside plant facilities or across an administrative boundary.

Line-Terminating Equipment (LTE)

Network Elements (NEs) that originate and/or terminate line (OC-N) signals; LTE includes NEs that originate and/or terminate line signals. LTEs originate, access, modify, and/or terminate the transport overhead.

Linear Add-Drop Multiplexer (LADM)

Network element in a linear network that provides access to all N, or some subset M (M is a standard hierarchical level vN), of the STS line signals contained within an OC-N optical channel. STS signals are added to (inserted) and/or dropped from (extracted) the OC-N signal as it passes through Add-Drop Multiplexer (ADM).

List Box

Displays a list of choices in the application window of the 1301 Network Manager (NM). A scroll bar is provided if the box contains more choices than the box can hold. The list box can be a single- or multiple-selection type.

Long Band

The longer wavelength half of the Erbium-Doped Fiber Amplifier (EDFA) amplification window that is approximately 1547 nm to 1560 nm.

LMC

Large Matrix Configuration

LMF

Loss of Multiframe

LMU

12 Muldem (module)

LOA

Loss of Activity

LOC

Loss of Clock

Location

The physical location (site) of a network device.

LOF

Loss of Frame

Long Reach (LR)

Refers to optical sections of approximately 25 kilometers or more in length and is applicable to all Synchronous Optical Network (SONET) rates. Compare with Short Reach (SR).

Loopback

A maintenance condition that redirects normal input to output, or vice versa; consists of a diagnostic test in which the transmitted signal is returned to the sending device after passing through a data communications link or network, thereby allowing a technician (or built-in diagnostic circuit) to compare the returned signal with the transmitted signal and determine what is wrong. Loopbacks are often done by excluding one piece of equipment after another, eliminating non-problematic equipment to isolate a problem.

LOP

Loss of Pointer

LOS

Loss of Signal

LOSS

Loss of Signal Second

LPF

Low-Pass Filter

LPTA

Line/Path Terminating ASIC

LPRN

See Light Power Received Normalized (LPRN)

LR

1. Line Receiver
2. See also Long Reach (LR).

LSS

Local Security Server

LT1

LT1 Level Translator (module)

LT2

LT2 Level Translator (module)

LT3

LT3 Level Translator (module)

LT4

LT4 Level Translator (module)

LT5

LT5 Level Translator (module)

LT8

LT8 Level Translator (module)

LTE

1. Line-Terminating Element

2. See also Line-Terminating Equipment (LTE).

3. Lite-terminating equipment (Synchronous Optical Network [SONET]). Asynchronous Transfer Mode (ATM) equipment, terminating a communications facility using a SONET Lite Transmission Convergence (TC) layer (usually reserved for end user or Local Area Network [LAN] equipment); does not implement some of the maintenance functions used in long-haul networks such as termination of path, line, and section overhead.

LTx

Level Translator. Generic term for one of several level translator modules used in the APS to interface between user control ports and internal formats. Types include RS-232, RS-485, X.25, and TABS physical interfaces.

M

M13

Multiplex/demultiplex DS1 to/from DS3

M16

Matrix 16?16. A time-space matrix circuit pack with 16 horizontal and 16 vertical inputs and outputs.

M32

Matrix 32?32. A time-space matrix circuit pack with 32 horizontal and 32 vertical inputs and outputs.

M40

Matrix 40?40. A time-space matrix circuit pack with 40 horizontal and 40 vertical inputs and outputs.

MA

1. Maintenance Assembly. An alarm or PM point checked for changes in a TABS system.
2. Memory Administration (Out of Service)

MAC

1. Memory Arbitration Circuit
2. Media Access Control. A standard data link layer address that is required for every port of device that connects to a LAN.

MAINT

Maintenance

MAINT, MT

Maintenance

MAJ

Major

MAL

Maintenance Access Link

MAN

Manual operation

ManCont

Manual Control

MB

1. Management Information Base

2. MegaByte(s)

Mb/s

Megabits per second

MCB

Master Clock (module). It provides a 155.52 MHz, modulated with 166.67 Hz frame signal, reference clock.

MCR

Master Control Register

MD

Mediation Device

MDB

Multipoint Data Bridge

MDL

Maintenance Data Link. Three bits used as a 28.2 kb/s terminal-to-terminal link identifier. Part of the overhead in the C-bit parity format.

Mediation

Functions

Usually consist of gateway communications functions, but can include information processing functions. When the two functions are combined, they are often contained in a stand-alone mediation device (MD) or packaged as an added module to an Network Element (NE) or equipment frame. Gateway communications functions often exist alone in a gateway NE or intermediate NE.

Menu Bar

Contains a list of menus. After menus are opened, commands are selected that instruct the application to perform an action.

MHz

MegaHertz

MIB

Management Information Base

MIC

1. Module Interface Circuit
2. Module Interface Controller

MIN

Minor

MJU

Multijunction Unit

MJ

Major

MLM

Multilongitudinal Mode

MLP

Multilink Processor

MMF

Multi-Mode Fiber

MML

Man-Machine Language

MMU

Memory Management Unit

MN

Minor

Mnemonics

Displays as an underlined character in a menu item or any dialog box control text. A mnemonic provides quick access to any menu item or dialog box field with a single keystroke.

MNP

Microcom Networking Protocol

MOC

Managed Object Class

Modem

Modulator/Demodulator

Module

An electrical assembly (usually a printed circuit board and faceplate) mechanically designed as a single detachable unit. (Also called *circuit pack*.)

Modulator/Demodulator (Modem)

A communications device that enables the computer to transmit information over a telephone line.

Module

An independent assembly of electronic components with some distinct function. A module might contain one, two, three, or more cards. In the past, there was nearly always one card in each module; therefore, “card” might be used when “module” was actually meant. Even in the case of a module that contains only one card, the module includes a front panel, ejector handles, etc. that are mounted on the card. See also Card and Circuit Packs.

Monitor

1. Visual display device (usually a CRT) associated with a control terminal
2. To receive outputs directed to another control port or user

MOP

Method of Procedure

MOS

Modular Optical System

Most-Significant Bit

The left-most bit position, Bit 1. The most-significant bit is transmitted first.

MPS

MIB Processing System

MPU

Microprocessor Unit

MQW

Multiple Quantum Well

MRA

Maintenance Resource Administration

MRC

Master Control Register

MSB

Most Significant Bit

MTL

Memory Transfer Link. A 12.5 Mb/s serial data link to allow higher-level processor to lower-level processor, satellite processor to OBPE/UBPE, communications

MTTR

Mean Time To Repair

MS-DOS

Microsoft Disk - Operating System

MS Windows

Microsoft Windows

MSI

Microprocessor Serial Interface

MT, MAINT

Maintenance

MTBF

Mean Time Between Failures

MTCE

Removed for maintenance

MTX

Matrix module

Multiplex (MUX, Mx)

Multiplex direction, the tributary input signal arriving on tributary interface (electrical) and being multiplexed up onto optical signal, then leaving system.

Combining several signals for transmission on some shared medium; signals are combined at the transmitter by a multiplexer (MUX) and split up at the receiver by a demultiplexer (DEMUX). The communications channel can be shared between the independent signals in one of several different ways: Time Division Multiplexing (TDM), Frequency Division Multiplexing (FDM), and Code Division Multiplexing (CDM). If the inputs take turns to use the output channel (TDM), the output bandwidth need be no greater than the maximum bandwidth of any input. If many inputs are active simultaneously, the output bandwidth must be at least as great as the total bandwidth of all simultaneously active inputs. In this case the multiplexer is also known as a concentrator. See also Time Division Multiplexing (TDM), Frequency Division Multiplexing (FDM), and Code Division Multiple Access (CDMA).

MUX

See Multiplex (MUX, Mx).

mV rms

Millivolts root mean square

Mx

See Multiplex (Mx, MUX).

N

NA

1. Not Alarmed or No Alarm
2. Not Applicable
3. Not Available, in reference to performance monitoring parameter validity flags.

NAD

Network Access Domain

**Narrow-Band Wavelength
Division Multiplex (NB-WDM)**

A Wavelength Division Multiplex (WDM) that uses optical channel spacing on the order of 7 nm or more; permits as many as four channels in the optical band from 1532 nm to 1558 nm. See also Dense Wavelength Division Multiplex (DWDM).

NAS

North American Standard

NB-WDM

See Narrow-Band Wavelength Division Multiplex (NB-WDM).

NC

Normally Closed

NCO

Numerically Controlled Oscillator

NDC

National Destination Code

NDSF

Nondispersion-Shifted Fiber

NE

1. Near End. See also NEND.
2. Network Element. Can be a switching NE or a transport NE. Cross-connects are transport NEs.
3. See also Network Element (NE).

NEBS

Network Equipment-Building System typical equipment requirements (Bell Communications Research; technical reference TR-EOP-000063).

NEC

National Electric Code

NE Configuration

The physical components within a Network Element (NE).

NEL

Network Element Layer

NEND

Near End

NEP

Network Element Processor

NEREF

Network Element Reference

NES

Network Element Synthesis

NET

Network Entity Title

NE Type

The model number of a specific Network Element (NE).

Network

Database representation of resources allocated to a secondary user. Network may also refer to physical elements of a communications system; equipment, transmission facilities, and end users.

Network element

A generic piece of equipment (such as a digital cross-connect) that represents a single function in the system

Network Element (NE)

Configurable transmission controller used as a multiplexer, access node, or Add/Drop multiplexer.

Network entity

Any of the physical devices that make up the communications network

Network facility

Equipment used to connect individual NEs

Network resource

All physical devices, including end equipment, transmission facilities, and end users

Network Service Access Point (NSAP)

The point at which the Open Systems Interconnection (OSI) network service is made available to a transport entity. NSAPs are identified by OSI network addresses. The NSAP is a generic standard for a network address consisting of 20 octets. ATM has specified E.164 for public network addressing and the NSAP address structure for private network addresses.

NIMAN

Not Isolated, requires Manual isolation.

NIPSS

Not fully isolated

NLAN

Network Local Area Network

nm

Nanometer

NM

Network Management or Network Manager

NMA

1. Network Monitoring and Analysis
2. Network Management Application

NMC

Network Management Components

NMI

Nonmaskable Interrupt

NML

Network Management Layer

NMS

Network Management System

NMU

Network Management Unit

NN

National Number

NO

Normally Open

NOC

Network Operation Center

Node

A point where transmission lines originate, interconnect, switch, or terminate. Generally consists of one or more pieces of equipment and is connected to other nodes via network facilities. Typically provides switching capabilities, multiplexing capabilities, end-point termination or origination, or other similar networking services. A point in the network where a network element is physically located (such as a digital cross-connect system)

Nonblocking

A feature that allows any input port to be connected to any output port. Nonblocking switch paths ensure that a connection can always be established between any two idle ports without rearranging existing connections.

Nonregenerative

A type of optical amplification whereby the optical signal is amplified without being converted to an electrical signal and then fed directly to the transmission line (as opposed to regenerative amplification where the optical signal is first converted into an electrical signal, amplified, converted back into an optical signal, and then fed to the transmission line).

Nonrevertive

As applied to protection switching, means that service is not automatically reestablished to previously active device when failure is corrected.

NORM

NORMal

North American AIS

The accepted Alarm Indication Signal (AIS) for use in North American Network, consisting of alternating 1010 pattern with valid framing and fixed overhead bit content. (Also called Standard AIS.)

Not Alarmed (NA)

A condition noted on the alarm manager screen, but does not cause an alarm situation to be recorded.

Not Reported (NR)

A condition that is not reported on any screen.

NR

1. Normal
2. Not Reported

NRM

Normal Response Mode

NRZ

Nonreturn to Zero

NS

Narrow-Spaced (wavelength division multiplexing)

NSA

Nonservice-Affecting

NSAP

See Network Service Access Point (NSAP).

NSDU

Network Service Data Unit

NTE

Network Terminal Equipment

NTMS

Network Traffic Management System

NURG

Non-Urgent

O

O1B

OC-3 Interface (module)

O4M

OC-12 Interface (module)

OA

Optical Amplifier

OAD

Object Access Domain

OADM

Optical Add/Drop Multiplexer

OAM&P

Operations, Administration, Maintenance, and Provisioning

OAS

Optical Amplifier Section (per ITU-T G.681)

OBC

On-Board Controller

OBPE

On-Board Processor Element. The third-tier processing element in a 3-tier control system.

OC

Optical Carrier

OC1

Optical Carrier, level 1 (51.84 Mb/s)

OC3

Optical Carrier, level 3 (155.52 Mb/s)

OC3c

Optical Carrier, level 3 (155.52 Mb/s) Concatenated

OC12

Optical Carrier, level 12 (622.08 Mb/s)

OCM

Optical Transceiver

OC12c

Optical Carrier, level 12 (622.08 Mb/s) Concatenated

OC24

Optical Carrier, level 24 (1.244 Gb/s)

OC48

Optical Carrier, level 48 (2.488 Gb/s)

OC48c

Optical Carrier, level 48 (2.488 Gb/s) Concatenated

OC192

Optical Carrier, level 192 (9.953 Gb/s)

OCH

Optical CHannel. Maps sequentially from OTS 1-4, following individual channel assignments.

OC-M

Optical Carrier, level M (for low-speed drops)

OC-N

Optical Carrier, level N (for high-speed drops)

OEM

Original Equipment Manufacturer

OFA

Optical Fiber Amplification

Off Normal

A term used in the telephone industry for operation action.

OGS

Optical Generic Section

OH

OverHead, Synchronous Optical Network (SONET)

OID

Object Identifier

OLH

Online Help

OMS

Optical Multiplex Section (per ITU-T G.681)

OOFEC

Out-of-Band Forward Error Correction

OOF

Out of Frame

OOF

Out of Frame-Path

O-LAN

Office LAN

OOS

See Out of Service (OOS).

OOS-AU

Out of Service-Autonomous. Entity is incapable of performing any of its provisioned functions, and there is no external administrative restriction inhibiting the entity from performing these functions. This state is entered when the network element detects an event rendering the entity incapable of performing any of its provisioned functions. The event may be from the entity, a supporting entity, or external network condition. In OOS-AU state, provisioning data updates and service-affecting maintenance are not permitted. Fault detection is active.

OOS-AUMA

Out-of-Service-Autonomous Management

OOS-MA

1. Out-of-Service-Management
2. Out-of-Service-Memory administration
3. Traditionally called “Manual Out-of-Service.” Entity is intentionally suspended by the external management command performing all of its provisioned functions; entity is operationally capable of performing its provisioning functions, although suspended by external management. While in this state: Updates of provisioning data and maintenance activities are permitted; physical actions, such as unplugging a circuit pack, will not generate alarms; fault detection is performed; alarm notifications are suppressed; however, when entering a new state without fault suppression, any new or cleared alarms that have not been reported, must be. See also OOS-MA-UAS, which restricts maintenance and fault detection activities.

OOS-MA-AS

Out-of-Service-Memory administration-Assigned

OOS-MA-MT

1. Out-of-Service-Management-Maintenance
2. Out-of-Service-Memory Administration-Maintenance

The entity has been manually removed from service for maintenance activity.

OOS-MA-UAS

1. Out-of-Service-Management-Unassigned
2. Out-of-Service-Memory Administration-Unassigned

The entity has not been assigned with the necessary provisioning data. No service activity or maintenance activity is permitted because the necessary data has not been assigned.

OOS-MT

Out-of-Service-Maintenance

OOS-UAS

Out-of-Service-Unassigned. The entity has not been assigned with the necessary provisioning data; no service activity or maintenance activity is permitted because the necessary data has not been assigned.

OPD

1. Optical Disk unit
2. Optical Disk Drive (module)

Open Systems

Interconnection (OSI)

The only internationally accepted framework of standards for communication between different systems made by different vendors. The primary intent for OSI is to create an open systems networking environment in which any vendor computer system, connected to any network, can freely share data with any other computer system on that network or a linked network. OSI was developed by the International Standards Organization. Most of the dominant communications protocols used have a structure based on the OSI model.

Operations

Support System (OSS)

Methods and procedures (mechanized or not) that directly support the telecommunications infrastructure daily operation. The average Local Exchange Carrier (LEC) has hundreds of OSSs, including automated systems supporting order negotiation, order processing, line assignment, line testing, and billing.

Operator Action

An operator-initiated action that interferes with the normal mechanism within the product for response to detected conditions, such as forced switching, inhibited switching, or taking a working module out of service.

OPS

Operations Processing System

OPS-INE

Operations System - Intelligent Network Element

OPS/INE

Operations Provisioning System for Intelligent Network Elements. An operations system used to implement memory administration on NEs like the 1631 SX. Typically a Stratus computer with software written by Bellcore.

Optical Carrier Level 1 (OC-1)

Optical signal that results from an optical conversion of an electrical STS-1 signal; this signal forms the basis of the interface.

Optical Carrier Level 3 (OC-3)

Optical signal produced by converting an STS-3 from an electrical signal to an optical signal.

Optical Carrier Level 12 (OC-12)

Optical signal produced by converting an STS-12 from an electrical signal to an optical signal.

Optical Carrier Level 48 (OC-48)

Optical signal produced by converting an STS-48 from an electrical signal to an optical signal.

Optical Carrier Level 192 (OC-192)

Optical signal produced by converting an STS-192 from an electrical signal to an optical signal.

Optical Carrier Level N (OC-N)

Optical signal resulting from an optical conversion of an electrical STS-N signal.

Optical Modules

Elements of the system that provide the photonic interface for either transmit or receive functions.

Optical Pulse

Distortion/

Dispersion

The property of an optical fiber that causes optical signals passing through the fiber to be bandwidth limited. A received light pulse will be wider than that was transmitted; the amount of this distortion increases with the fiber length.

Option Button

A 1301 Network Manger Explorer (NMX) action button; represents a single choice in a limited set of mutually exclusive choices. In a group of buttons user can select only one at any time.

ORB

Object Request Broker

Order Wire, Orderwire (OW)

1. A circuit used by telephone personnel for fixing, installing, and removing phone lines.
2. Equipment and circuit providing a telephone company the means to establish voice contact between central office and carrier repeater locations.
3. A Synchronous Optical Network/Synchronous Digital Hierarchy (SONET/SDH) term for a connection request; consists of one octet contained within the Section Overhead (SOH).

ORS

Object Registration Service

OS

1. Operations System (Also called OSS.)
2. Operating System, as in HP-UX, DOS, or Windows 2000

OSB

Overhead Server Board

OSC

1. See Oscillator (OSC).
2. Optical Supervisory Channel.

Oscillator (OSC)

1. A device for generating an analog test signal.
2. An electronic circuit that creates a single-frequency signal.

OSDB

Operations System Database

OSI

See Open Systems Interconnection (OSI).

OSL

Output Subscription Level

OSLINK

Operations System LINK has failed (X.25 link)

OSMINE

Operations Systems Modifications for the Integration of Network Elements.

O-SNCP

Optical Sub-Network Connection Protection

OSNR

Optical Signal-to-Noise Ratio

OSPORT

Operations System Port

OSS

1. See Operations Support System (OSS) (Also called OS.)
2. Operating System Surveillance

OSSMAINT

Operations Support System - MAINTenance

OSSNMA

Operations Support System - Network Monitoring and Analysis

OSSPROV

Operations Support System - Provisioning

OSSTEST

Operations Support System - Testing

OTDR

Optical Time Domain Reflectometer

OTG

Online Troubleshooting Guide

OTGR

Operations Technology Generic Requirements. Bellcore requirements for network elements.

OTPROM

One-Time Programmable Read-Only Memory

OTN

Optical Transport Network

OTS

1. Object Transport Service
2. Optical Transmission Section (per ITU-T G.681)
3. Optical Transport System, a dense WDM system (per AT&T RFP)

Out of Service (OOS)

1. A status indication that function is not being performed by a given circuit pack and it can be removed for maintenance.
2. An equipped module is OOS when unavailable for system use; module may be OOS for operator action, equipment failure, diagnostic testing, or family of equipment not carrying traffic. See also SNOS (Status, Not currently Out of Service).
- 3 Equipment or channel not carrying traffic.
4. Status indicating that traffic is not being processed by a given module and that the module can be removed for maintenance.
5. Designation for an inactive address or function.

OV

OpenView

Overhead

Anything that is not traffic in a digital bit stream. Traffic is the payload, or information being carried by signal. Overhead is that portion of signal that carries information about timing and maintenance of signal, but does not carry any portion of information originally sent and meant to be received at the far end.

OVFL

Overflow

OVw

OpenView Windows

OW

See Order Wire, Orderwire (OW),

OXB

Optical Transceiver (module)

OXO

Oven-Controlled Oscillator

P

P

Preferred

P39

3V Power Converter (module)

P56

5V Power Converter (module)

PA

1. Parallel Alarm
2. Public Archive

Packet Switching

A communications paradigm in which packets (messages or fragments of messages) are individually routed between nodes, with no previously established communication path. Packets are routed to their destination through the most expedient route (as determined by some routing algorithm). Not all packets traveling between the same two hosts, even those from a single message, will necessarily follow the same route. The destination computer reassembles the packets into their appropriate sequence. Packet switching optimizes available bandwidth use in a network and minimizes latency. See also X.25.

PAD

Packet Assembler/Disassembler

Parameter

An element of a command, which further defines the object of the command or provides data needed for proper command execution. See individual command descriptions.

Parity Check

A process for detecting whether bits of data (parts of characters) have been altered during transmission of that data. Data are transmitted as a stream of bits with values of one or zero; for example, each character of data composed of seven bits has another bit added to it. The value of that bit is chosen so that either the total number of one bits is always even if Even Parity error correction is to be obeyed, or always odd if Odd Parity correction is chosen.

Password

A secret word entered in a security file for an individual; contains a unique group of characters that identify a specific user. To log on, a password must be entered in response to the Password prompt.

Path command

Any valid connect or disconnect command directed to matrix

PA/ST

Parallel Alarm/Serial Telemetry

Path

1. A path at a given bit rate is a logical connection between the point at which a standard frame format for the signal is assembled and the point at which the standard frame format for the signal is disassembled.
2. The route a telecommunications signal follows through a circuit or through the air.

Path Overhead (POH)

Synchronous Optical Network (SONET) path overhead assigned to and transported with the payload until payload is demultiplexed; used for functions necessary to transport the payload, for example, end-to-end network management. These functions include parity check and trace capability. POH is not implemented in SONET Lite. See also STS Path Overhead (STS POH).

Payload Pointer

The pointer that indicates the location of the beginning of the Synchronous Payload Envelope (SPE).

PBIT

Parity monitoring. Select PBIT monitoring to monitor performance on signals other than CBIT parity. PBIT is corrected at each DS3 level; therefore, it provides only error monitoring from DS3 electrical interface to DS3 interface.

P-bus

Processor/Poll Bus - A multidrop CMOS serial bus that implements HDLC-NRM protocol for normal polling of traffic

PC

1. Personal computer.
2. For connectors, positive or physical connection.

PCA

See Protection Channel Access (PCA).

PCM

1. See Pulse Code Modulation (PCM).
2. PCM is also slang for the Sony F1 format, which stores PCM digital audio on videotape.

PCS

Privileged Command Script.

PCN

Product Change Notice.

PDN

Public Data Network

PDU

Power Distribution Unit.

PECL

Positive Electron-Coupled Logic.

Peer or PEER

1. A unit of communications hardware or software on the same protocol layer of a network as another. A common way of viewing a communications link is as two protocol stacks that are actually connected only at the very lowest (physical) layer, but can be regarded as being connected at each higher layer by virtue of the lower layers services provided. Peer-to-peer communication refers to these real or virtual connections between corresponding systems in each layer. For example, when two people talk to each other, the lowest layer is the physical layer, the sound waves traveling from mouth to ear (so mouths and ears are peers). The next layer might be the speech and hearing centers in the brains and the top layer their cerebellums or minds. Although, barring telepathy, nothing passes directly between the two minds, there is a peer-to-peer communication between them.
2. User security channel identifier

Performance

Monitoring (PM)

Reports and analyzes deviations from defined parameters, detecting any signal degradation that could lead to a service-affecting failure; refers to actions that monitor signal integrity and quality (such as counting parity errors in Synchronous Optical Network [SONET] equipment) and equipment impairments (such as laser degrade). Nominally includes reporting of values recorded during monitoring and sending them over a digitally multiplexed transmission channel.

Permanent Virtual Circuit (PVC)

A virtual circuit that is permanently established, saving the time associated with circuit establishment and tear-down.

PEROM

Programmable Erasable Read-Only Memory

Persistence

Continuity of the state of an object across reboots; a property of a programming language where created objects and variables continue to exist and retain their values between runs of the program.

PES

Parity Errored Second

PFO

Premium Feature Option

PG

Point Generator

PGA

Pin Grid Array

Phase-Locked Loop (PLL)

A circuit containing a voltage-controlled oscillator whose phase or frequency can be “steered” to keep it in sync with a reference source. A PLL circuit is generally used to lock onto and “up-convert” the frequency of a stable source.

Physical network

The actual equipment in a communications network.

PIC

Programmable Interrupt Controller

PID

1. Password Identifier
2. Path Identification
3. Product Identifier

Pigtail

A length of optical fiber with one end terminated at a connector and the other end attached to a light source or detector. The fiber couples light from a source to a connectorized fiber cable or from a fiber cable to a detector.

Pi Mux

A configuration of Add-Drop Multiplex (ADM) circuit that uses a back-to-back terminal type of repeater configuration, allowing add/drop of channels in either or both directions independently. An application of this configuration is thinning routes. The configuration is similar to a pair of 1:1 terminals back-to-back. Pi mux is correctly referred to as Linear ADM (LADM). Compare with T Mux.

PIN

1. Positive Intrinsic Negative. Type of photodetector used to sense lightwave energy then to convert it to electrical signals.
2. A type of semiconductor diode that has a 3-layer structure composed of P-type, intrinsic type, and N-type material.

PJC

Pointer Justification Count

PJN

Pointer Justification Negative

PJP

Pointer Justification Positive

PLD

Programmable Logic Device

PLL

Phase-Locked Loop. See Phase-Locked Loop (PLL).

PM

See Performance Monitoring (PM).

PMC

Process Monitory and Control

PMV

Performance Monitoring Visualization

PNM

Physical Network Manager

POH

See Path Overhead (POH).

Point of Presence (POP)

1. A physical place within a Local Access and Transport Area (LATA) where a long-distance carrier or a cellular provider interfaces with the network of the Local Exchange Carrier (LEC), also called the local telephone company.
2. The point at which the LEC terminates subscriber circuits for cellular phone call, long-distance dial-up phone call, or leased-line communications.
3. A meet point where Internet Service Providers (ISPs) exchange traffic and routes.

Point-to-Point

Protocol (PPP)

A communications protocol; the protocol defined in RFC 1661, the Internet standard for transmitting network layer datagrams (for example, IP packets) over serial point-to-point links. PPP is designed to operate over asynchronous connections and bit-oriented synchronous systems. It can configure connections to a remote network dynamically and test that the link is usable. PPP can be configured to encapsulate different network layer protocols by using appropriate Network Control Protocol (NCP).

Polarization Mode Dispersion (PMD)

Identified around 1990, PMD might become a limiting issue in optical span design now that data rates are going higher (10 Gb/s and 40 Gb/s), and spans are getting longer. PMD is the dispersion of an optical signal, caused by the different polarization modes of the optical signal traveling down a fiber at slightly different velocities. The amount of PMD is statistical in nature and varies randomly with time. PMD is independent of chromatic dispersion, so a span can be PMD-limited in distance even in the absence of chromatic dispersion. Due to the random nature of the physical causes of PMD, it is more difficult to be compensated for, as chromatic dispersion, but newer techniques are being developed. See also Chromatic Dispersion.

POP

See Point of Presence (POP).

Port

1. A physical connection on a network element that has a specified rate and type of physical attachment; a connection or socket on the computer. Ports are used for connecting devices (cables, modems, printers, monitors) to a PC, then sending information from the computer to the devices. Serial ports (COM 1-COM 4) and parallel ports (LPT1, LPT2) are the most commonly used.
2. An interface point between the system and its external environment. Can be physical, logical, or both.

Portability

Software designed for one computer system can be used on other systems; little software outside MS-DOS software for IBM and IBM clone computers is portable; UNIX software is portable to an extent.

PP

Pointer Processor

ppm

Parts per million

PPP

Point-to-Point Protocol. See Point-to-Point Protocol (PPP).

PPS

Path Protection Switching. See Protection Switching (PS).

PPSN

Public Packet Switched Network

PRC

Primary Reference Clock

PRI

1. Primary (alarm)
2. Primary Rate Interface. See Primary Rate Interface (PRI).
3. Protection Release Inhibited

PRM

Performance Report Messages

PRN

Printer

Protocol

A set of rules that govern the interaction of processes or applications in a system or network

PRT

DS1 Protect (module)

Primary Rate

Interface (PRI)

PRI is intended for heavy-duty users. The typical channel structure is composed of 23 B channels plus one 64 Kb/s D channel for a total of 1536 Kb/s.

PROT

PROTECTION

Protection

Channel Access (PCA)

The tributary signals carried by the protection channel when it is offline (i.e., not protecting the working traffic). It is lower priority and will be dropped in favor of the working traffic in the event of a working channel failure.

Protection Switch Count (PSC)

The Performance Monitoring (PM) parameter used to count the number of protection switches for a protection group.

Protection Switch Oscillation Control (PSOC)

A policy (for 1680 OGM) replacing *Switch Hold* in which alarm conditions (i.e. signal fail or degrade) are “locked” on a facility for a period of time after a number of alarm oscillations have occurred. This state is called Alarm Lock; while active, it causes a facility to be treated as though the locked alarm were active. This policy accomplishes prevention of rapid switching oscillation in a much cleaner fashion than *Switch Hold*. Also, it directly addresses requirements CR5-52 and R5-53 of GR-253-CORE, which *Switch Hold* does not.

Protection

Switching (PS)

The automatic Network Element (NE) function that provides recovery of traffic in the event of a network or equipment failure. Protection may be an individual NE function (as in unidirectional linear protection or in a unidirectional ring) or a network function (as in bidirectional linear protection or in a bidirectional ring).

Protection Switching Duration (PSD)

This parameter measures the total time, in seconds, for which service was removed from a given (nonprotection) line.

Protection Switching Line, Counts

This parameter measures the number of times service switches from a particular working line to a protection line.

PROV

See Provisioning (PROV).

ProvData

Provisioning Data

Provision

Transmission of TL1 messages to a Network Element (NE) to modify the NE database. Provisioning allows for modification of the NE options, configuration, connection, and cross-connections.

Provisioning (PROV)

1. The act of providing operational transmission service by performing the following tasks: equipping (or installing modules and equipment), configuring, and setting the data path In Service (IS) or Out of Service (OOS).
2. The entry into a network image of network resources that are installed in network image and are available for assignment.

Proxy

Provides protocol conversion between TL1 commands and Common Management Information Service Element (CMISE) commands.

PRS

Primary Reference System

PRT

DS1 Protect (module)

PSA

Power Supply Alarm

PSC

See Protection Switch Count (PSC).

PSCC

Processor Serial Control Circuit

PSD

Protection Switching Duration

PSF

5V Power Supply (module)

PSOC

See Protection Switch Oscillation Control (PSOC).

PSN

Packet-Switched Network. See Packet Switching. See also X.25.

ps/nm

Picoseconds per nanometer

PSOS

Portable Scalable Operating System. See Portability. See also Scalable.

PST

Primary State

PSU

Power Supply Unit

PSW

Protect Switch

PTA

Port and Telecommunications Administration

PTE

Path-Terminating Equipment. See also DS0 Path-Terminating Equipment (DS0 PTE).

Pulse Code Modulation (PCM)

A method by which an audio signal is represented as digital data. Virtually all digital audio systems use PCM.

PVC

1. Permanent Virtual Channel
2. See Permanent Virtual Circuit (PVC).
3. Permanent Virtual Connection (Asynchronous Transfer Mode [ATM] terminology)
4. Polyvinyl Chloride

PWM

Pulse-Width Modulator

PWR

1. Power
2. Power converter

Q

Q3

Reference point between two layers in the TNM model

QoS

Quality of Service

QRS

Quasi-Random Signal

QRSF

Quasi-Random Signal, Framed

QRSS

Quasi-Random Signal Source. Signals used for testing digital circuits, particularly DS-1 (for example, T-1) circuits.

QRSU

Quasi-Random Signal, Unframed

QTY

Quantity

R

R

Redundant

Rack

An assembly of shelves within a standard set of vertical mounting posts or rails (called rack channels).

RADM

Ring Add-Drop Multiplexer

RADMAP

Remote Alarm Display Map

RAM

See Random Access Memory (RAM).

Random Access Memory (RAM)

The working memory of the card; memory used for storing data temporarily while working on it, running application programs, etc. "Random access" means that any RAM area can be accessed directly and immediately. RAM is called volatile memory; information in RAM will disappear if the power is switched off before it is saved to disk. RAM is used on all downloadable cards to run the application loads of the cards.

Range of terms

The beginning and ending terms separated by two ampersands and a hyphen (&&-). For example, range T3-8&&-12 expands to {T3-8, T3-9, T3-10, T3-11, T3-12}.

RBD

1. Rear Beam Detect
2. Rear Beam Photo Detector

RBOC

Regional Bell Operating Company

R-bus

Remote Inventory Bus. A bidirectional CMOS/TTL level serial data bus, provides access to the remote inventory data bank on each circuit pack.

RCC

Relay Contact-closure Control

RCV

Receive module

RDI

Remote Defect Indication

RDU

Rack Distribution Unit (module)

Redundancy,

Redundant

1. That part of any message that may be eliminated without losing important information.
2. Having one or more “backup” systems available in case of failure of the main system.

Remote Defect

Indication-Line (RDI-L)

An indication returned to a transmitting Line-Terminating Equipment (LTE) upon receipt of a line Alarm Indication Signal (AIS) code or detection of an incoming line failure at the receiving LTE. (Formerly Line Far-end Receive Failure [FERF].)

Revertive

Service is automatically restored to the primary device after failure is corrected.

RFI

Radio Frequency Interference

RFS

Remote File Server

RI

Remote Inventory

Ring

A network where the network nodes are interconnected by means of a circular route that may be broken at any one point without permanently disrupting traffic. Rings are either unidirectional (uniring) or bidirectional (bi-ring).

Ring Add-Drop Multiplexer (RADM)

Network element in a ring network that provides access to all N, or some subset M (M is a standard hierarchical level v N), of the STS line signals contained within an OC-N optical channel. STS signals are added to (inserted) and/or dropped from (extracted) the OC-N signal as it passes through the ADM. Ring ADMs may be either unidirectional (uniring) or bidirectional (bi-ring).

RIP

Routing Information Protocol

RMAS

Remote Memory Administration System

RMS

Root Means Square

Roll

An operation that switches (rolls) a cross-connection from one output port to another with no disruption of service

Route Diversity

A network configuration that provides two connection paths between two points, each physically separated from the other except at the terminal end points. This method retains service over one of the routes if the other route is broken (such as when a cable is cut). A route diversity application can be built using a ring network or a linear network as a basis.

RPB

Ring Protect Board (module)

RPC

1. Redundant Power Converter
2. Remote Procedure Call

RS-232

An Electronic Industry Association (EIA) data communications standard using serial binary data interchange standard applicable to interconnection of Data Terminal Equipment (DTE); the most common asynchronous serial line standard; the EIA equivalent of ITU-T V.24 and V.28. RS-232 specifies connector gender and pin use, but not their physical type (RS-423 specifies the electrical signals.); 25-way D-type connectors are common but often only three wires are connected: one ground (pin seven) and one for data in each direction; other pins are mostly related to hardware handshaking between sender and receiver and to carrier detection on modems, inoperative circuits, busy conditions etc. The standard classifies equipment as either Data Communications Equipment (DCE) or Data Terminal Equipment (DTE).

RS-232C

An Electronic Industry Association (EIA) standard applicable to interconnection of Data Terminal Equipment (DTE) and Data Communication Equipment (DCE) using serial binary data interchange.

RS-422

An Electronic Industry Association (EIA) standard that specifies the electrical characteristics of a balanced voltage digital interface circuit for the interchange of serial binary signals between Data Terminal Equipment (DTE) and Data Communications Equipment (DCE).

RS-449

An Electronic Industry Association (EIA) data communications standard employing synchronous serial binary data interchange

RS-485

An Electronic Industry Association (EIA) data communications standard for high-speed, long distance multipoint connections

RSP

Rack Status Panel (module)

RT

Remote Terminal

RTC

Real-Time Clock

RTN

Return

RTU

Remote Test Unit

RX

Receive, receiver

RX+TX

Receiver plus Transceiver

S

S3M

STM Interface (module)

SA

Service-Affecting

SABM

Set Asynchronous Balanced Mode

SAM

System Administrator Manager

SAN

Storage Area Network

SARTS

Switched Access Remote Test System

SAS

Severe errored frame/Alarm indication signal (SEF/AIS) Second

SB

Short Band (SB). See also Conventional-Band (C-Band).

SBI

Serial Bus Interface

SBS

Stimulated Brillouin Scattering

SBT

System Bus Termination (module)

SC

A specific type of fiber-optic cable connector. Scalable

Scalable

Often refers to technology applications that can be made greater or smaller without great leaps in cost. For example, Virtual Private Networks (Switched 56/64, X.25, Frame Relay, Switched Multimegabit Data Service (SMDS), and Asynchronous Transfer Mode [ATM] networks) serve as effective replacements for dedicated, leased-line networks because their capabilities are scalable, with the costs remaining in reasonable relationship to associated functionality.

SCC

Serial Communications Controller

SCHED

Schedule

SCI

See Serial Communications Interface (SCI).

SCO

Serial Communications interface data from shelf processor to microcontroller.

SCS

Center Stage Switch

SCSI

Small Computer System Interface. A bus that links the optical and hard disks to the processor.

SCU

Stratum Clock Unit

SDC

Serial-to-Dual-bit Converter

SDCC

Section Data Communications Channel. See also Data Communications Channel (DCC).

SDH

See Synchronous Digital Hierarchy (SDH).

SDMA

Serial Direct Memory Access

SEA

Supported Entity Outage

SEC

1. Secondary
2. Security Manager

Section

The portion of a transmission facility (including terminating points) between a terminal network element and a regenerator or between two regenerators. A terminating point is the point after signal regeneration, where Performance Monitoring (PM) is or can be done. In Synchronous Optical Network (SONET), the section envelope encompasses the line envelope. See also Synchronous Payloads.

Section-

Terminating Equipment (STE)

Network elements that terminate the Synchronous Optical Network (SONET) physical and section layers. STE is either a regenerator or part of a Line-Terminating Equipment (LTE). STEs interpret and either modify or create the section SONET overhead.

SEEPROM

Serially Electronically Erasable Programmable Read-Only Memory

SEF

Severely Errored Frame

SEFS

Severely Errored Frame Seconds

SEMF

Synchronous Equipment Management Function

Send Button

A 1301 Network Manger (NM) action button that forwards commands to the network element.

Seq

Sequence

Serial

Communications Interface (SCI)

An asynchronous full-duplex serial data link between the shelf processor and modules containing microcontrollers. Card Presence Indicator (CPI), SCI, and Serial Communications (SCO) interface data signals comprise this link.

Service Condition

A data path can be selected as In Service (IS), which is the normal operational state, or Out-of-Service (OOS) condition, which disables protection switching and alarm and Performance Monitoring (PM) functions. An OOS data path may or may not be able to carry test traffic, depending on system configuration.

SESCP

Severely Errored Seconds-CP-bit Path

SESL

Severely Errored Seconds-Line

SESP

Severely Errored Seconds-Path

Session

1. A logical network connection between two addressable units for the exchange of data.
2. A connection between a user and the Network Element (NE). One user can have multiple sessions. All provisioning operations, queries, and autonomous reports are transported between the NE and user through a session.

Severely Errored Seconds (SES)

Contains more than N Coding Violations (CVs). The value of N with frame size and bit rate should be chosen to correspond to a Bit Error Ratio (BER) of approximately 10⁻³, assuming errors are randomly distributed. This count may be used to determine problems for particular types of services and/or as a measure of facility outage duration.

SF

1. See Signal Fail (SF).
2. See Superframe (SF).

SFF

1. TSI Switch Frame Format
2. Superframe Format (DS1 signal)

SFFT1

STS-1 Fast Facility Protection Threshold 1

SFFT2

STS-1 Fast Facility Protection Threshold 2

SFFT3

STS-1 Fast Facility Protection Threshold 3

SFP

Small Form Factor Plug-in

SFT

First/Third Stage Switch

SGND

Signal Ground

Shelf

Basic rack assembly unit; contains subassemblies (usually circuit packs, also referred to as modules).

Short Band

The shorter wavelength half of the Erbium-Doped Fiber Amplifier (EDFA) amplification window that is approximately 1530 nm to 1543 nm.

Short Reach (SR)

A Synchronous Optical Network (SONET) term; refers to optical sections of approximately 2 kilometers or less in length. The sections may be interoffice or intraoffice. Compare with Long Reach (LR).

SI36

SONET I/O 36 STS-1 rack or shelf

SI48

SONET I/O 48 DS3/STS-1 rack or shelf

Si

Silicon

SIB

System Integration Block

SID

1. System Identification. A five-digit number assigned to identify the particular cellular carrier from whom one is obtaining service; identifies “home” system.
2. System Identifier. An alphanumeric designator that uniquely identifies a particular system or site within the network.
3. Site Identifier

SID/NSAP

See System Identification/ Network Service Access Point (SID/NSAP).

Signal Fail (SF)

1. Also known as Loss of Signal (LOS), detection of a LOS, Loss of Frame (LOF), or Loss of Pointer (LOP) on the lines or on tributaries (for example, OC12s) connected to the system.
2. Threshold value used to compare calculated Bit Error Rate (or Ratio) (BER) value with SF threshold. If BER value is less than SF threshold, an Excessive BER (EXBER) condition is declared. See also Bit Error Rate (or Ratio) (BER).

Simplex (SX)

1. Operating a channel in one direction only with no ability to operate in the other direction.
2. One-sided printing.

SIO

Serial Input/Output (module)

SIS

Selectable (DS1) Idle Signal

SKP

Skip

SLA

Service Level Agreement

SLC

Smart Line Card

SLM

Single Longitudinal Mode (laser)

SLTP

Section/Line Terminating Processor

SLU

Standard-to-Large Upgrade

SM

1. SONET (Synchronous Optical Network) Multiplexer. See Synchronous Optical Network (SONET). See also Multiplex (MUX, Mx).
2. Subrate Multiplexer. See also SRM.

SMC

1. Standard Matrix Configuration.
2. Switching Matrix Circuit.

SMF

1. System Management Function
2. Single Mode Fiber

SML

1. Small Machine Language
2. Synchronous Maintenance Link
3. Service Management Layer

SMPS

Switched-Mode Power Supply

SMS

Small Machine Shelf

SMT

Matrix Terminator

SN

Subscriber Number

SNC

SubNetwork Connection

SNCP

SubNetwork Connection Protection

SNIDER

Asynchronous ASCII Echoplex Protocol (A trademark of Bellcore.)

SNML

Sub-Network Management Layer

SNMP

Simple Network Management Protocol

SNOS

Status, Not currently Out of Service. In the 1680 OGM this is a TL1 error code returned when a user attempts to place an entity Out of Service (OOS) when it is already OOS.

SOC

Standard Operating Conditions

Software Generic

A set of files representing a software release for an NE

SOH

Section Overhead

SOIC

Small Outline Integrated Circuit

SOM

Second of Minute

SONET

See Synchronous Optical Network (SONET).

Span

1. Refers to the optical fiber(s) connecting one site to another site; that portion of a high-speed digital system that connects a Central Office (CO) or terminal office to terminal office.
2. Also called a T-Span Line; a repeated outside plant four-wire, two twisted-pair transmission line.
3. A call center term: the total duration of a schedule from start time to stop time, including all breaks.

SPB

Satellite Processor (module)

SPC

1. Shelf Processor Card.
2. Serial-to-Parallel Converter
3. Serial Parallel Chip

SPE

Synchronous Payload Envelope. See also Synchronous Payloads.

SPI

Serial Peripheral Interface.

SPL

DS1 Splitter

SPLTA

Split Connection, A Side

SPLTB

Split Connection, B Side

SPLTE

Split Connection, Equipment Side

SPLTEF

Split Connection, Equipment and Facility Sides

SPLTF

Split Connection, Facility Side

SPRAM

Single-Port Random Access Memory

SPU

Shelf Processor Unit

SR

See Short Reach (SR).

SRAM

Static Random Access Memory

SRDM

Subrate Digital Multiplexing

SRM

Subrate Multiplexer. See also SM.

SSP

System Status Panel

SST

Secondary State

SSU

1. Subrate Service Unit
2. Synchronization Supply Unit. See also Building Integrated Timing Supply (BITS).

ST

A specific type of fiber-optic cable connector.

Standard AIS

The accepted Alarm Indication Signal (AIS) for use in North American Network, consisting of alternating 1010 pattern with valid framing and fixed overhead bit content (Also called North American AIS.)

Status Points

Electrical circuit activation points; provide a mechanism for electrical control circuits exterior to the product to notify it that a specific event has occurred; provide confirmation that control-point initiated actions have occurred, and/or monitor local office environmental alarm conditions, such as power failure, fire, and temperature.

Status Response

When an operator enters a command into the product through the user interface, each command entered will receive a status response to indicate the success or failure of the command.

STBY

Standby

STBYC

Cold Standby

STBYH

Standby Hot, secondary service state; indicates that the entity is providing hot standby redundant protection.

STC

STS-1 Transport Conditioner

STD

Standard

STE

Section-Terminating Equipment

STM-1

Synchronous Transport Module, level 1

STM-4

Synchronous Transport Module, level 4

STM-16

Synchronous Transport Module, level 16

STM-N

Synchronous Transport Module, Level N

STNE

Sectionalize Trouble Network Element

STP

STS-1 Transport Protect

STS-1

Synchronous Transport Signal, level 1; the basic logical building block Synchronous Optical Network (SONET) electrical signal with a rate of 51.84 Mb/s.

STS-3

Synchronous Transport Signal, level 3

STS-3c

Concatenated Synchronous Transport Signal, level 3. A concatenated signal is formed by linking 3 STS-1 signals together, which allows transport of payloads larger than the capacity of an STS-1. (Payloads larger than one STS-1 are known as superate payloads.) An STS-3c payload consists of 2349 bytes (3 783).

STS-12

Synchronous Transport Signal, level 12.

STS-12c

Concatenated Synchronous Transport Signal, level 12. a concatenated signal is formed by linking 12 sts-1 signals together, which allows transport of payloads larger than the capacity of an sts-1. (payloads larger than one sts-1 are known as superate payloads.) an sts-12c payload consists of 2349 bytes (3 783).

STS-48

Synchronous Transport Signal, level 48.

STS-48c

Concatenated Synchronous Transport Signal, level 48. A concatenated signal is formed by linking 48 STS-1 signals together, which allows transport of payloads larger than the capacity of an STS-1. (Payloads larger than one STS-1 are known as superate payloads.) An STS-48c payload consists of 2349 bytes (3 783).

STS Envelope

Capacity

Bandwidth within and aligned to the Synchronous Transport Signal (STS) frame that carries the STS Synchronous Payload Envelope (SPE). This bandwidth can be combined from N STS1s to carry an STS-Nc SPE. See also STS Synchronous Payload Envelope (STS SPE).

STS-N

Synchronous Transport Signal, level N.

STS-Nc

Concatenated Synchronous Transport Signal, level N. The concatenated signal is formed by linking N STS-1 signals together. For example, an STS-3c payload consists of N x 783 bytes.

STS Path

Overhead

(STS POH)

Nine evenly distributed path overhead bytes per 125 μ s starting at the first byte of the Synchronous Transport Signal Synchronous Payload Envelope (STS SPE); provides for communication between creation and disassembly points of the STS SPE.

STS Path-Terminating Equipment (STS PTE)

Network elements that multiplex/demultiplex the Synchronous Transport Signal (STS) payload. STS PTEs interpret and either modify or create the STS Path Overhead (STS POH) necessary to transport the STS payload.

STS Payload

Capacity

The maximum bandwidth within the Synchronous Transport Signal Synchronous Payload Envelope (STS SPE) available for payload. See also STS Synchronous Payload Envelope (STS SPE).

STS POH

See STS Path Overhead (STS POH).

STS PTE

See STS Path-Terminating Equipment (STS PTE).

STS-SPE

See STS Synchronous Payload Envelope (STS SPE) and STS Envelope Capacity.

STS Synchronous Payload Envelope (STS SPE)

A 125- μ s frame structure composed of Synchronous Transport Signal Path Overhead (STS POH) and bandwidth for payload. See also STS Path Overhead (STS POH).

STX-1

Electronic Synchronous Transport Signal, level 1. Digital signal cross-connect point for equipment that generates or uses STS1 signals. This point has defined waveshapes and voltage levels, per Bell Communications Research; Technical Reference TR-NWT-000253.

Superate Payload

Payload larger than one STS-1.

Super Rate Signal

A signal that must be carried by a concatenated Synchronous Transport Signal (STS), level N (STS-Nc). Payloads larger than one STS-1 are known as superate payloads.

Superframe (SF)

One possible framing format for a DS1 signal (corresponding to D4). Unlike Extended Superframe (ESF), there is no sync messaging channel in an SF signal. Compare with Extended Superframe (ESF).

SVC

Switched Virtual Circuit. See also Virtual Circuit (VC).

SWDL

Software Downloaded

SWI

DS1 Switch (module)

Switch Exercise

An exercise of the K-Byte protocol that coordinates protection switching between network elements. Traffic is not effected by an exercise (for example, no bridge, select, or squelch operations occur).

Switch Hold

A policy adopted in Synchronous Optical Network (SONET) Multiplexer products prior to the Enhanced in which switching would be disallowed for a period of time after X number of switches had occurred in a specified time period. Purpose: to prevent rapid oscillation between facilities or equipment when Wait to Restore (WTR) did not prevent it.

SX

1. Identifier for Alcatel-Lucent Digital Cross-Connect product family.
2. See also Simplex (SX).

SYNC

Synchronous. Events that are phase and frequency locked to a common timing reference.

Synchronization Supply Unit (SSU)

See Building Integrated Timing Supply (BITS).

Synchronous

The essential characteristic of time scales or signals in which their corresponding significant instants occur at precisely the same average rate.

Synchronous

Digital Hierarchy (SDH)

European set of standard fiber-optic-based serial standards planned for use with Synchronous Optical Network (SONET) and Asynchronous Transfer Mode (ATM); some SDH and SONET standards are identical; standardized by the International Telecommunications Union (ITU). See also Asynchronous Transfer Mode (ATM) and Synchronous Optical Network (SONET).

Synchronous

Optical Network (SONET)

A family of fiber-optic transmission rates (51.84 Mb/s to 13.22 Gb/s), created to provide needed flexibility to transport many digital signals with different capacities, and to provide a design standard. SONET is an optical interface standard that allows interworking of transmission products from multiple vendors; it defines physical interface, optical line rates (optical carrier [OC] signals), frame format, and an Operations, Administration, Maintenance, and Provisioning (OAM&P) protocol. A standard for interconnecting digital networks and lightwave systems agreed upon by most major manufacturers. SONET supports new broadband services, and enhanced OAM&P. This standard permits connecting SONET-compatible equipment of one manufacturer to SONET-compatible equipment of another manufacturer on the other end. All present services, such as DS1s, DS2s, DS3s, LANs, etc., can be brought onto a hub and interfaced with SONET.

Synchronous

Network

The synchronization of the payloads of a transmission system to a master (network) clock that can be traced to a reference clock.

Synchronous

Payloads

Payloads derivable from a network transmission signal by removing integral numbers of bits in every frame; (for example, there are no variable bit stuffing rate adjustments required to fit the payload in the transmission signal).

Synchronous Signal

A signal associated with a clock, or timing, signal. Clock moves data from one point to another. NRZ signals are usually synchronous.

Synchronous Transport Module

This electrical signal is obtained by byte interleaving four STM-1 signals together. The rate of the STM-4 is 622.080 Mb/s.

Synchronous Transport Module Level 1 (STM-1)

The basic Synchronous Digital Hierarchy (SDH) logical building block electrical signal with a rate of 155.520 Mb/s. European SDS building block that equates to STS3.

Synchronous Transport Module Level 4 (STM-4)

This electrical signal is obtained by byte interleaving four STM-1 signals together. The rate of the STM-4 is 622.080 Mb/s. European Synchronous Digital Hierarchy (SDH) building block that equates to STS12.

Synchronous Transport Signal Level 1 (STS1)

The basic Synchronous Optical Network (SONET) logical building block electrical signal with a rate of 51.84 Mb/s.

Synchronous Transport Signal Level N (STS-N)

This electrical signal is obtained by byte interleaving N STS1 signals together. The rate of the STS-N is N times 51.84 Mb/s.

System Identification/Network Service Access Point (SID/NSAP)

An alphanumeric designator that uniquely identifies a particular system or site within a network. See also Network Service Access Point (NSAP).

T

T0

Digital transmission link with a capacity of 64 kb/s (DS0)

T1

1. A collective term referring to the DS1 facility as a whole. Refers to traffic-carrying circuits.
2. Digital transmission link with a capacity of 1.544 Mb/s (DS1)

T1DM

T1 Digital Multiplex Format

T3

1. A collective term referring to the DS3 facility as a whole. Refers to traffic-carrying circuits rather than to modules.
2. Digital transmission link with a capacity of 44.736 Mb/s (DS3)

TABS

Telemetry Asynchronous Block, Serial. A protocol used to collect data on alarms and performance monitoring. (A registered trademark of Bellcore.)

TAC

Technical Assistance Center

TACC

Test Access

TADRMAP

Target identifier ADDRESS Resolution Map

TAP

1. Test Access Port
2. Test Access Path
3. Trouble Analysis Procedures

TAPP

Test Access Port Pair

Target Identifier (TID)

Number that may be null (missing). TIDs identify which network element receives a Transaction Language 1 (TL1) message.

TARP

Target identifier Address Resolution Protocol

TASSA

Technical Assistance and Software Support Agreement

TB

Test Busy (diagnostic)

TBS

Telecom Bus Serializer

TB1

Terminal Block 1

TBD

To Be Determined

TBOS

See Telemetry Byte-Oriented Serial (TBOS).

TCA

See Threshold Crossing Alert (TCA).

TCP/IP

Transmission Control Protocol/Internet Protocol. A networking protocol that provides communication across interconnected networks, between computers with diverse hardware architectures and various operating systems.

TCXO

Temperature-Compensated Crystal Oscillator

TDM

1. Time Division Multiplexed
2. See also Time Division Multiplexing (TDM).

TDSN

Time Division Subchannel Number

TEC

Thermo-Electric Cooler

TEL

Telemetry module. See Telemetry Module (TEL).

Telemetry Byte-Oriented Serial (TBOS)

Protocol for transmitting alarm, status, and control points between network element and operations system. TBOS is described in AT&T Communications Compatibility Bulletin No. 149, Issue 2.

Telemetry Module (TEL)

A generic name given to synchronization modules in the 1648 SM product.

Terminal

An end point or a device connected to same.

Threshold

Crossing Alert (TCA)

Threshold crossing parameters are values assigned to specific types of error conditions. The values represent the number of times that condition occurs within a 15-minute or 1-day time frame. If the number of occurrences exceeds the threshold value, a TCA situation displays on the appropriate Performance Monitoring (PM) screen. See also Performance Monitoring (PM).

TID

See Target Identifier (TID).

TIE

Time Interval Error

Time Division

Multiplexing (TDM)

A type of multiplexing where two or more channels of information are transmitted over the same link by allocating a different time interval ("slot" or "slice") for the transmission of each channel. (For example: The channels take turns to use the link. Typically a periodic synchronizing signal or distinguishing identifier is required so the receiver can determine which channel is which. TDM becomes inefficient when traffic is intermittent because the time slot remains allocated even when the channel has no data to transmit. Statistical TDM was developed to overcome this problem. Compare with Frequency Division Multiplexing (FDM) and Code Division Multiplexing (CDM).

Time Slot

1. In time division multiplexing or switching, the slot belonging to a voice, data, or video conversation; it can be occupied with conversation or left blank, but the slot is always present. The capacity of the switch or the transmission channel can be determined by figuring how many slots are present.

2. The smallest switchable data unit on the SCbus or SCx bus data bus. A time slot consists of eight consecutive bits of data. One time slot is equivalent to a data path with a bandwidth of 64 Kpbs. (A Signal Computing System Architecture [SCSA] term.)

TIRKS

Trunks Integrated Record Keeping System (A registered trademark of Bellcore.)

TL1

See Transaction Language 1 (TL1).

TL1 DAT

Transaction Language 1 Direct Access Terminal

TLP

Transmission Level Point

TLS

Terminate-and-Leave State

TM

Terminal Multiplexer

TMAS

Transport, Maintenance, and Administration System

TMB

TSI Muldem module

TMC

Transmux Converter

TMN

Telecommunications Management Network

T Mux

A configuration of Add-Drop Multiplex (ADM) circuit that uses a back-to-back terminal type of repeater configuration that allows add/drop of channels; used in ring networks. This configuration differs from pi mux in that it may receive from either direction but always sends in both directions. This configuration typically uses only one optical channel. Compare with Pi Mux.

TN

Telecommunication Network

TNM

Telecommunication Network Management

TOD

Time of Day

TP

Termination Point

TPS

Transmission Processing System

TPU

1. Tape Unit
2. TABS Points Upgrade

Transaction

Language 1 (TL1)

A Bellcore-specified protocol for communication between network elements; a subset of CCITT MML Standard.

Transparent

An action or activity that is not apparent to the user or device.

Transport

Facilities associated with the transmission of OC1 or higher-level signals.

Transport

Overhead

The overhead added to Synchronous Transport Signal (STS) Synchronous Payload Envelope (SPE) for transport; consists of Line and Section overhead.

TRM

Bus Termination (module)

TS0.

Time Slot Zero

TSC

Test Session Controller

TSGR

Test Signal Generator

TSI

Time Slot Interchange

TSI

Time Slot multiplexer

TSID

1. Test Signal Identification
2. Transmission Identification

TSS

Third Stage Switch

TTL

Transistor-to-Transistor Logic

TTY

Teletype Terminal (keyboard-equipped terminal with no cursor-addressable display)

TVA

Topology Viewer Application

TX

Transmitter, transmit path

U

UA

Unnumbered Acknowledgement

UART

See Universal Asynchronous Receiver/Transmitter (UART).

UASCP

Unavailable Seconds-CP-bit Path

UASL

Unavailable Seconds-Line

UASP

Unavailable Seconds-Path

UB

User Board

UBPE

User Board Processor Element

UCAL

User Community Authorization Level

UCFC

User Community Functional Category

UCFCI

User Community Functional Category Input

UCFCO

User Community Functional Category Output

UDR

See Unidirectional Ring (UDR).

UDS

Unit Data Sheet

UEQ

Unequipped. Equipment entity is not equipped with necessary hardware.

UI

User Interface

UID

User Identifier

UL

Underwriters Laboratories

UNAM

User name

Unassigned

(X-Bits/Bytes)

Those locations within the signal that do not have an assigned function or value; receiver ignores the value of these bytes (except for BIP-8 calculation/verification).

Unavailable

Seconds (UAS)

The parameter UAS measures the duration for which service was unavailable (in seconds). Service becomes unavailable if 10 consecutive Severely Errored Seconds (SES) occur. When the service becomes unavailable, it remains unavailable until 10 consecutive nonseverely errored seconds.

UNEQ-P

Unequipped-Path

Unequipped Channel

A portion of an STS-N such as an STS1 Synchronous Payload Envelope (SPE) or an intentionally unoccupied Virtual Tributary (VT) SPE.

Unequipped Indication

A code that originating equipment places in unequipped channels to indicate to Path-Terminating Equipment (PTE) that the channel is intentionally unoccupied so that alarms may be inhibited.

UNFR

Unframed DS1 signal format

Unidirectional Ring (UDR)

Ring networks that send the same traffic over two different routes (for example, counter-rotating paths) to each node in the network. This allows the node to select one direction or the other for its own traffic for protection purposes. Rings send all traffic through each node. Rings also permit add/drop of channels at any node using a T Mux.

Unidirectional Switching

The protection switching scheme whereby the failed path is switched to the protection path, but the path in the other direction is not switched.

Universal Asynchronous Receiver/Transmitter (UART)

A device, usually an integrated circuit chip, that performs the parallel-to-serial conversion of digital data to be transmitted and the serial-to-parallel conversion of digital data received; converts incoming serial data from a modem (or whatever else is connected to the serial port) into the parallel form the Personal Computer (PC) handles. Parallel data conversion into serial data makes data suitable for asynchronous transmission on phone lines. PCs have a serial port used for bringing data into and out of the computer; this serial port is used for data movement on a channel that requires that one bit be sent (or received) after another, serially; UART chips control PC serial ports.

Unprotected

Operation

A network element (usually a terminal) where the individual transport element does not provide traffic protection; a higher network device, such as a cross-connect, provides protection by moving the traffic from the failed transmission path to other paths in the network.

UPC

A method used to polish the ends of fiber optic cables. This method produces a domed polish that reduces back reflections up to -55dB.

UPPS

Unidirectional Path Protection Switching

UPSR

Unidirectional Path Switched Ring

URG

Urgent

USDB

User Security Database

User Channel

This is allocated to the user for input of information such as data communication for use in maintenance activities and remoting of alarms external to the span equipment in a proprietary fashion.

USI

User System Interface. More commonly referred to as Communication Interface Unit (CIU). Also called CID or CPORT.

USI-LAN

User System Interface-Local Area Network

USM

User Services Manager

V

V5

Virtual tributary path overhead. See Virtual Tributary (VT).

VA

Volt-Amperes

VC

1. Virtual Channel
2. Virtual Container
3. See also Virtual Circuit (VC).
4. Virtual Concatenation

VCAT

Virtual Concatenation

VCG

Virtual Concatenation Group

VCN

Virtual Channel Number

VCXO

Voltage-Controlled Crystal Oscillator

Vdc

Volts Direct Current

VDT

Video Display Terminal. Keyboard-equipped terminal with cursor-addressable display.

VF

1. Voice Frequency
2. Variable Factor. An Asynchronous Transfer Mode (ATM) term; a relative measure of the cell rate margin normalized by the variance of the aggregate cell rate on the link.

VGA

1. Virtual Graphics Application
2. Variable Graphics Array

VI

Valid Interrupt

Violation

Monitoring and Removal (VMR)

Process by which parity errors are corrected at a switch and section. Equivalent to an infinite stop filter in a Frequency Division Multiplexing (FDM) system. Only parity violations are removed; the bit errors that caused them still exist. Detected violations are removed so they do not propagate beyond maintenance span.

Virtual Circuit (VC)

A communications line, voice or data, that appears to the user to be a dedicated point-to-point circuit. VCs are generally set up on a per call basis and disconnected when the call is ended; VC concept was first used in data communications with packet switching; VCs have become more common in ultra-high speed applications; VC is referred to as a logical, rather than physical path for a call.

Virtual Tributary (VT)

A structure designed for transport and switching of sub-DS3 payloads. A unit of sub-SONET bandwidth that can be combined, or concatenated, for transmission through the network; VT1.5 equals 1.544 Mb/s; VT2 equals 2,048 Mb/s; VT3 equals 3 Mb/s; VT6 equals 6 Mb/s.

VLR

1. Very Long Reach.
2. Visitors Location Register. A wireless telecommunications term; refers to local database maintained by cellular provider.

VMR

See Violation Monitoring and Removal (VMR).

Virtual Tributary, Envelope Capacity

Bandwidth within, and aligned to, the VT superframe that is available for the VT synchronous payload envelope.

Virtual Tributary Group (VTG)

A 9-row by 12-column structure (108 bytes) that carries one or more Virtual Tributaries (VTs) of the same size. Seven VT groups (756 bytes) are byte interleaved within the VT-structured Synchronous Payload Envelope (SPE).

Virtual Tributary, Path Overhead (V5)

One path overhead for every 500 μ s located at the first byte of the Virtual Tributary, Synchronous Payload Envelope (VT SPE). VT path overhead provides for communication between point of creation and point of disassembly of a VT SPE.

Virtual Tributary, Path-Terminating Equipment (VT PTE)

Network elements that multiplex/demultiplex the Virtual Tributary (VT) payload. VT PTEs interpret and either modify or create the path overhead necessary to transport VT payload. A VT PTE is considered a Synchronous Transport Signal Path-Terminating Equipment (STS PTE), a Line-Terminating Equipment (LTE), and/or a Section-Terminating Equipment (STE).

Virtual Tributary, Synchronous Payload Envelope (VT SPE)

A 500- μ s frame structure carried by the VT is composed of VT path overhead and bandwidth for payload; envelope is contained within and can have any alignment with respect to VT envelope capacity. The term typically refers to VT1.5, VT2, VT3, VT6, and VT x -Nc SPEs.

VOA

Variable Optical Attenuator

VSCC

Virtual Tributary/Synchronous Transport Signal (level 1) Cross-Connect

VT Payload Capacity

The maximum bandwidth within the Virtual Tributary (VT) Synchronous Payload Envelope (SPE) that is available for payload.

VT

See Virtual Tributary (VT).

VT1

Virtual Tributary 1.

VT1.5

Virtual Tributary 1.5 (1.728 Mb/s).

VT2

Virtual Tributary level 2.

VTG

See Virtual Tributary Group (VTG).

VT PTE

See Virtual Tributary, Path-Terminating Equipment (VT PTE).

VT SPE

See Virtual Tributary, Synchronous Payload Envelope (VT SPE).

VT Superframe

The Virtual Tributary (VT) is organized into a 500- μ s superframe structure overlaid on and aligned to the 125- μ s STS1 Synchronous Payload Envelope (SPE), which contains the VT payload pointer and the VT SPE.

VT x

A VT of size x (currently $x = 1.5, 2, 3,$ or 6).

VT x -Nc

See Concatenated Virtual Tributary (VT x -Nc) and Virtual Tributary (VT).

VUE

Visual User Environment.

W

W

Watts.

WAN

Wide-Area Network.

WAD

Wavelength Add-Drop.

WADM

Wavelength Add-Drop Multiplexer (-ing).

WB-WDM

See Wide-Band Wavelength Division Multiplex (WB-WDM).

WDM

Wavelength Division Multiplex (-er, -ing).

WDCS

Wideband Digital Cross-Connect System.

WEC

Western Electric Company.

W/ft²

Watts per square foot.

Wide-Band

Wavelength

Division Multiplex

(WB-WDM)

Wavelength Division Multiplexing that uses two optical channels: one at 1310 nm, and the other at approximately 1550 nm.

Window

Area on the 1301 Network Manager (NM) screen that has a border; can include menus, icons, buttons, check lists, prompts, and instructions.

Window Border

Window outer edge; use the mouse to select and drag border to resize window.

Window Title

Located in the left side of the title bar; displays the application name.

Windows

Application

Refers to an application designed to run with Microsoft Windows™. It does not run without Windows. All Windows applications follow similar conventions for menu arrangement, dialog box style, and keyboard and mouse use.

Workstation (WS)

Any one of a variety of Visual Display Terminals (VDTs), ranging from a simple keyboard/monitor to an intelligent, processor-controlled VDT.

WS DS1

Wayside Digital Signal 1.

X

X.25

A Packet-Switched Network (PSN). Approved by the International Organization for Standardization (ISO), X.25 defines standard physical layer, data link layer, and network layers, providing a standard protocol suite for the Data Terminal Equipment-Data Communications Equipment (DTE-DCE) interface, typically used for Open Systems (OS) communication. X.25 was developed to describe how data passes into and out of public data communications networks. X.25 networks are in use throughout the world. Standards and protocols for Packet-Switched Networks (PSNs) are from the International Telegraph and Telephone Consultative Committee (CCITT), now known as International Telecommunications Union (ITU).

X-bits

Two overhead bits per DS3 M-frame used as an alarm channel.

XBP

X-Bit Processing.

XCO

Crystal-Controlled Oscillator.

XCV

Transceiver module.

XFP

10 Gigabit Small Form Factor Plug-in

XMT

Transmit module.

XO

Crystal Oscillator.

XON

XON(/XOFF) communications flow control protocol.

