

GLOSSARY

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A

ATM - Asynchronous Transfer Mode A very high-speed transmission technology, ATM features high bandwidth, low delay, packet-like switching and multiplexing Utilizes fixed-size cells with header and information fields

Amplitude - The distance between high or low points of a waveform or signal. Also referred to as wave" height"

Attenuation - Loss of volume during transmission, or decrease in the power of a signal, light beam, or light wave Measured in decibels Opposite of gain

AWG - American Wire Gauge. Standard measuring gauge for nonferrous conductors (ie, non-iron and non-steel) Gauge measures the diameter of a conductor (thickness of cable)

B

Backbone Wiring - The physical/electrical interconnections between telecommunications closets and equipment rooms. Cross-connect hardware and cabling in the Main and Intermediate Cross-Connects are considered part of the backbone wiring.

Bandwidth - The difference between the highest and the lowest frequencies of a transmission channel (path for information transmission) Identifies the amount of data that can be sent through a given channel Measured in Hertz (Hz); higher bandwidth numbers mean higher data capacity.

Bend Radius (Fiber) - Radius of curvature that a fiber can bend without breaking Also see Cable Bend Radius.

BICSI - (Building Industry Consulting Service International) BICSI is a non-profit professional association, for the promotion of telecom industry standards.

Bit Error Rate (BER) - In digital applications, the percentage of bits received in error to the total number of bits received Usually expressed as a number to the power of 10 For example 10 to the fifth power means that one in every 100,000 bits transmitted will be wrong.

Buffer Coating - Protective material coating applied to fibers Stated in microns.

Bus - A network topology in which nodes are connected to a single cable with terminations at each end.

C

Cable Assembly - A fixed length of cable with connectors installed on both ends Sometimes called a Patch Cord, or Patch Cable

Cable Bend Radius - The amount of bend that can occur before a cable may sustain damage or increased attenuation

Category 3 - CAT3, A Category of Performance for inside wire and cable systems Commonly used for voice applications and data to 10Mbps Defined by FCC Part 68, ANSI/EIA/TIA-568, TIA TSB-36 and TIA TSB-40

Category 5 - CAT5, A Category of Performance for inside wire and cable systems Used in support of voice and data applications requiring a carrier frequency of up to 100 MHz. Defined by FCC Part 68, EIA/TIA-568, TIA TSB-36 and TIA TSB-40

Category 5e (Enhanced) - CAT5e, A Category of Performance for inside wire and cable. Used in support of signalling rates of up to 100MHz over distances of up to 100 meters. Calls for tighter twists, electrical balancing between pairs and fewer cable anomalies CAT 5e is intended to support 100 Base-T, ATM and Gigabit Ethernet Currently the most common cabling being installed for LAN connectivity

Category 6 - CAT6, A cable standard for Unshielded Twisted Pair (UTP) supporting signaling rates up to 250 MHz. Applications include 1000Base-T, ATM, Gigabit Ethernet and applications under development

Category of Performance - Cabling and cabling component standard adopted by the telecommunications industry

Cladding - The transparent material, usually glass, that surrounds the core of an optical fiber, causing any dispersed light to be reflected back into the central core, thereby helping to maintain signal strength over long distances

Cleaving - To cut the end of fiber at 90 degrees with as few rough edges as possible before a fiber termination

CO - Central Office. Telephone company facility where subscribers' lines are joined to switching equipment for connection to each other, locally and long distance Sometimes the same as the overseas term "public exchange"

Coaxial Cable - A cable composed of an insulated central conducting wire wrapped in another cylindrical conductor (the shield) The whole thing is usually wrapped in another insulating layer and an outer protective layer A coaxial cable has great capacity to carry vast quantities of information. It is typically used in high-speed data and CATV applications.

Compliance - A wiring device that meets all characteristics of a standard is said to be in compliance with that standard

Conductor - Any substance, usually a wire or cable, that can carry an electrical current

Connecting Block - Also called a terminal block, punch-down block, quick-connect block, or cross-connect block A plastic block containing metal wiring terminals to establish connections from one group of wires to another Usually each wire can be connected to several other wires in a bus or common arrangement There are several types of connecting blocks 66 clip, BIX, Krone, 110, etc A connecting block has insulation displacement connections (IDCs), which means you don't have to remove insulation from around the wire conductor before you "punch it down" (terminate it)

Connector - A device that connects wires or fibers in cable to equipment or other wires or fibers Wire and optical connectors most often join transmission media to equipment or cross connects A connector at the end of a telephone cable or wire is used to join that cable to another cable with a mating connector or to some other telecommunications device Note Connectors are sometimes referred to as jacks, but though all jacks are connectors, not all connectors are jacks

Cross-connect - Distribution system equipment used to terminate and administer communication circuits In a wire crossconnect, jumper wires or patch cords are used to make circuit connections In an optical cross-connect, fiber patch cords are used. The cross-connect is located in an equipment room, riser closet, or satellite closet

Crosstalk - See Near-End Crosstalk.