
List of Abbreviations

A

ANSI. American National Standards Institute.

ARL. Adjusted ring length.

ASCII. American National Standard Code for Information Interchange.

B

bps. Bits per second.

Bps. Bytes per second.

C

C&SM. Communications and system management.

D

dB. Decibel.

DOS. Disk Operating System.

F

FDDI. Fiber Distributed Data Interface.

H

Hz. Hertz.

I

IEEE. Institute of Electrical and Electronics Engineers.

I/O. Input/output.

ISO. International Organization for Standardization.

K

km. Kilometer.

L

LAM. Lobe Attachment Module

LAN. Local area network.

LU. Logical unit.

M

Mb. Megabit.

MB. Megabyte.

Mbps. Megabits per second.

MBps. Megabytes per second.

MHz. Megahertz.

N

NETBIOS. Network Basic Input/Output System.

nm. Nanometer.

O

OS/2. Operating System/2.

P

PC. Personal computer.

R

RI. Ring in.

RO. Ring out.

S

SNA. Systems Network Architecture.

U

UL. Underwriters Laboratory.

μm. Micron or Micrometer.

Glossary

This Glossary defines local area network terms and abbreviations. It includes terms and definitions from the *IBM Dictionary of Computing (Information Processing, Personal Computing, Telecommunications, Office Systems, IBM-Specific Terms)*, SC20-1699.

- The symbol (A) identifies definitions from the *American National Dictionary for Information Processing Systems*, copyright 1982 by the Computer and Business Equipment Manufacturers Association (CBEMA).
- The symbol (I) identifies definitions from the *ISO Vocabulary-Information Processing and ISO Vocabulary-Office Machines*, developed by the International Organization for Standardization, Technical Committee 97, Subcommittee 1.
- The symbol (T) identifies definitions from draft international standards, draft proposals, and working papers in development by the International Organization for Standardization, Technical Committee 97, Subcommittee 1.

This Glossary uses standard reference words for entries. They are:

Reference	Meaning
Deprecated term for	Indicates that the term should not be used (because it is obsolete, misleading, ambiguous, or jargonistic) and refers to the preferred term. For a deprecated term, the commentary contains only this reference; the deprecated term is not defined.
Synonymous with	Appears in the commentary of a preferred term and identifies less desirable or less specific terms that have the same meaning.
Synonym for	Appears in the commentary of a less desirable or less specific term and identifies the preferred term that has the same meaning. The less desired or less specific term is not defined.
Contrast with	Refers to a term that has an opposite or substantially different meaning.
See	Refers to terms in which this term appears.
See also	Refers to related terms that have similar (but not synonymous) meanings.

A

access unit. A unit that allows multiple attaching devices access to a token-ring network at a central point such as a wiring closet or in an open work area.

active. (1) Able to communicate on the network. A token-ring network adapter is active if it is able to transmit and receive on the network. (2) Operational. (3) Pertaining to a node or device that is connected or is available for connection to another node or device. (4) Currently transmitting or receiving.

adapter. In a LAN, within a communicating device, a circuit card that, with its associated software and/or microcode, enables the device to communicate over the network.

adapter address. Twelve hexadecimal digits that identify a LAN adapter.

address. (1) In data communication, the IEEE-assigned unique code or the unique locally administered code assigned to each device or workstation connected to a network. (2) A character, group of characters, or a value that identifies a register, a particular part of storage, a data source, or a data sink. The value is represented by one or more characters. (T) (3) To refer to a device or an item of data by its address. (A) (4) The location in the storage of a computer where data is stored. (5) In word processing, the location, identified by the address code, of a specific section of the recording medium or storage. (T)

adjusted ring length (ARL). In a multiple-wiring-closet ring, the sum of all wiring closet-to-wiring closet cables in the main ring path less the length of the shortest of those cables.

alert. (1) For IBM LAN management products, a notification indicating a possible security violation, a persistent error condition, or an interruption or potential interruption in the flow of data around the network. See also *network management vector transport*. (2) In SNA, a record sent to a system problem management focal point to communicate the existence of an alert condition. (3) In the NetView program, a high-priority event that warrants immediate attention. This data base record is generated for certain event types that are defined by user-constructed filters.

American National Standard Code for Information Interchange (ASCII). The standard code, using a coded character set consisting of 7-bit coded characters (8 bits including parity check), used for information interchange among data processing systems, data communication systems, and associated equipment. The ASCII set consists of control characters and graphics characters. (A)

application program. (1) A program written for or by a user that applies to the user's work. Some application programs receive support and services from a special kind of application program called a network application program. (2) A program used to connect and communicate with stations in a network, enabling users to perform application-oriented activities.

architecture. A logical structure that encompasses operating principles including services, functions, and protocols. See *computer architecture*, *network architecture*, *Systems Application Architecture (SAA)*, *Systems Network Architecture (SNA)*.

attach. To make a device a part of a network logically.

Note: Not to be confused with *connect*, which implies physically connecting a device to a network.

attaching device. Any device that is physically connected to a network and can communicate over the network.

attenuation. A decrease in magnitude of current, voltage, or electrical or optical power of a signal in transmission between points. It may be expressed in decibels or nepers.

B

backup path. In an IBM Token-Ring Network, an alternative path for signal flow through access units and their main ring path cabling. The backup path allows recovery of the operational portion of the network while problem determination procedures are being performed.

bandwidth. (1) The difference, expressed in hertz, between the highest and the lowest frequencies of a range of frequencies. For example, analog transmission by recognizable voice telephone requires a bandwidth of about 3000 hertz (3 kHz). (2) The bandwidth of an optical link designates the information-carrying capacity of the link and is related to the maximum bit rate that a fiber link can support.

baseband. (1) A frequency band that uses the complete bandwidth of a transmission medium. Contrast with *broadband*, *carrierband*. (2) A method of data transmission that encodes, modulates, and impresses information on the transmission medium without shifting or altering the frequency of the information signal.

Basic Input/Output System (BIOS). In IBM personal computers with PC I/O channel architecture, microcode that controls basic hardware operations such as interactions with diskette drives, fixed disk drives, and the keyboard.

baud. The rate at which signal conditions are transmitted per second. Contrast with *bits per second (bps)*.

beaconing. An error-indicating function of token-ring adapters that assists in locating a problem causing a hard error on a token-ring network.

bits per second (bps). The rate at which bits are transmitted per second. Contrast with *baud*.

bridge. (1) An attaching device that connects two LAN segments to allow the transfer of information from one LAN segment to the other. A bridge may connect the LAN segments directly by network adapters and software in a single device, or may connect network adapters in two separate devices through software and use of a telecommunications link between the two adapters. (2) A functional unit that connects two LANs that use the same logical link control (LLC) procedures but may use the same or different medium access control (MAC) procedures. (T) Contrast with *gateway* and *router*.

bridge number. The bridge identifier that the user specifies in the bridge program configuration file. The bridge number distinguishes among parallel bridges. Parallel bridges connect the same two LAN segments.

broadband. (1) A frequency band between any two non-zone frequencies. (2) A frequency band divisible into several narrower bands so that different kinds of transmissions such as voice, video, and data transmission can occur at the same time. Synonymous with *wideband*. Contrast with *baseband*, *carrierband*.

broadband local area network (LAN). A local area network (LAN) in which information is encoded, multiplexed, and transmitted through modulation of a carrier. (T)

buffer. (1) A portion of storage used to hold input or output data temporarily. (2) A routine or storage used to compensate for a difference in data rate or time of occurrence of events, when transferring data from one device to another. (A)

building cable. The permanently installed cable within a building that interconnects offices to wiring closets, wiring closets to wiring closets, and wiring closets to computer rooms of building entrances.

bus. (1) In a processor, a physical facility on which data is transferred to all destinations, but from which only addressed destinations may read in accordance with appropriate conventions. (I) (2) A network configuration in which nodes are interconnected through a bidirectional transmission medium. (3) One or more conductors used for transmitting signals or power. (A)

byte. (1) A string that consists of a number of bits, treated as a unit, and representing a character. (T) (2) A binary character operated upon as a unit and usually shorter than a computer word. (A) (3) A string that consists of a particular number of bits, usually 8, that is treated as a unit, and that represents a character. (4) A group of 8 adjacent binary digits that represent one extended binary-coded decimal interchange code (EBCDIC) character. (5) See *n-bit byte*.

C

cable loss (optical). The loss in an optical cable equals the attenuation coefficient for the cabled fiber times the cable length.

cable segment. A section of cable between components or devices on a network. A segment may consist of a single patch cable, multiple patch cables connected together, or a combination of building cable and patch cables connected together. See *LAN segment*, *ring segment*.

carrier. A wave or pulse train that may be varied by a signal bearing information to be transmitted over a communication system.

carrierband. A frequency band in which the modulated signal is superimposed on a carrier signal (as differentiated from baseband), but only one channel is present on the medium (as differentiated from broadband). Contrast with *baseband*, *broadband*.

channel. (1) A functional unit, controlled by a host computer, that handles the transfer of data between processor storage and local peripheral equipment. (2) A path along which signals can be sent. (3) The portion of a storage medium that is accessible to a given reading or writing station. (4) In broadband transmission, a designation of a frequency band 6 MHz wide.

cladding. The optical material surrounding the core of an optical fiber which has a lower index of refraction than the core.

closed network. Synonym for *closed path*.

closed path. A network in which all of the cable paths and wiring closets are directly or indirectly connected. Synonymous with *closed network*.

component. (1) Any part of a network other than an attaching device, such as an IBM 8228 Multistation Access Unit. (2) Hardware or software that is part of a functional unit.

computer architecture. The organizational structure of a computer system, including hardware and software. (A)

configuration. (1) The arrangement of a computer system or network as defined by the nature, number, and chief characteristics of its functional units. More specifically, the term may refer to a hardware configuration or a software configuration. (I) (A) (2) The devices and programs that make up a system, subsystem, or network. (3) See also *system configuration*.

connect. In a LAN, to physically join a cable from a station to an access unit or network connection point. Contrast with *attach*.

controller. A unit that controls input/output operations for one or more devices.

converter. In an IBM Token-Ring Network, a device that converts electronic signals to light pulses or vice versa for use in an optical fiber subsystem.

core. The central region of an optical fiber through which light is transmitted.

D

data. (1) A representation of facts, concepts, or instructions in a formalized manner suitable for communication, interpretation, or processing by human or automatic means. (I) (A) (2) Any representations such as characters or analog quantities to which meaning is or might be assigned. (A)

data rate. See *data transfer rate, line data rate*.

data transfer rate. The average number of bits, characters, or blocks per unit of time passing between equipment in a data-transmission session. (I) The rate is expressed in bits, characters, or blocks per second, minute, or hour.

data transmission. The conveying of data from one place for reception elsewhere by means of telecommunications. (I)

default. Pertaining to an attribute, value, or option that is assumed when none is explicitly specified.

destination. Any point or location, such as a node, station, or particular terminal, to which information is to be sent.

destination address. A field in the medium access control (MAC) frame that identifies the physical location to which information is to be sent. Contrast with *source address*.

device. (1) A mechanical, electrical, or electronic contrivance with a specific purpose. (2) An input/output unit such as a terminal, display, or printer. See also *attaching device*.

diagnostics. Modules or tests used by computer users and service personnel to diagnose hardware problems.

Disk Operating System (DOS). An operating system for computer systems that use disks and diskettes for auxiliary storage of programs and data.

distribution panel. A wiring board that provides a patch panel function and mounts in a rack. See also *patch panel*.

downstream. (1) On an IBM Token-Ring Network, the direction of data flow. (2) In the direction of data flow or toward the destination of transmission. Contrast with *upstream*.

drop. A cable that leads from a faceplate to the distribution panel in a wiring closet. When the IBM Cabling System is used with the IBM Token-Ring Network, a drop may form part of a lobe. See also *lobe*.

E

electromagnetic interference (EMI). A disturbance in the transmission of data on a network resulting from the magnetism created by a current of electricity.

enterprise. A business or organization that consists of two or more sites separated by a public right-of-way or a geographical distance. Contrast with *establishment*.

equipment rack. A metal stand for mounting network components, such as distribution panels and IBM 8228 Multistation Access Units. Synonymous with *rack*.

establishment. A user's premises that do not extend across public rights of way (for example, a single office building, warehouse, or campus). Contrast with *enterprise*.

exception. An abnormal condition such as an I/O error encountered in processing a data set or a file. See also *overflow exception* and *underflow exception*.

F

faceplate. A wall-mounted or surface-mounted plate for connecting data and voice connectors to a cabling system.

fault. An accidental condition that causes a functional unit to fail to perform its required function. (I) (A)

Fiber Distributed Data Interface (FDDI). A high-performance, general-purpose, multi-station network designed for efficient operation with a peak data transfer rate of 100 Mbps. It uses token-ring architecture with optical fiber as the transmission medium over distances of several kilometers.

field. On a data medium or a storage medium, a specified area used for a particular category of data; for example, a group of character positions used to enter or display wage rates on a panel. (T)

file. A named set of records stored or processed as a unit. (T)

file server. A high-capacity disk storage device or a computer that each computer on a network can access to retrieve files that can be shared among the attached computers.

filter. A device or program that separates data, signals, or material in accordance with specified criteria. (A)

flag. A character or indicator that signals the occurrence of some condition, such as the setting of a switch, or the end of a word. (A)

frame. (1) The unit of transmission in some LANs, including the IBM Token-Ring Network and the IBM PC Network. It includes delimiters, control characters, information, and checking characters. On a token-ring network, a frame is created from a token when the token has data appended to it. On a token bus network (IBM PC Network), all frames including the token frame contain a preamble, start delimiter, control address, optional data and checking characters, end delimiter, and are followed by a minimum silence period. (2) A housing for machine elements. (3) In synchronous data link control (SDLC), the vehicle for every command, every response, and all information that is transmitted using SDLC procedures. Each frame begins and ends with a flag.

G

gateway. A device and its associated software that interconnect networks or systems of different architectures. The connection is usually made above the reference model network layer. For example, a gateway allows LANs access to System/370 host computers. Contrast with *bridge* and *router*.

group. (1) A set of related records that have the same value for a particular field in all records. (2) A collection of users who can share access authorities for protected resources. (3) A list of names that are known together by a single name.

H

hard error. An error condition on a network that requires that the source of the error be removed or that the network be reconfigured before the network can resume reliable operation. See also *beaconing*. Contrast with *soft error*.

hardware. Physical equipment as opposed to programs, procedures, rules, and associated documentation. (I) (A)

header. The portion of a message that contains control information for the message such as one or more destination fields, name of the originating station, input sequence number, character string indicating the type of message, and priority level for the message.

hierarchical network. A multiple-segment network configuration providing only one path through intermediate segments between source segments and destination segments. Contrast with *mesh network*.

host computer. (1) The primary or controlling computer in a multi-computer installation or network. (2) In a network, a processing unit in which resides a network access method. Synonymous with *host processor*.

host processor. Synonym for *host computer*.

I

initialize. In a LAN, to prepare the adapter (and adapter support code, if used) for use by an application program.

input/output (I/O). (1) Pertaining to a device whose parts can perform an input process and an output process at the same time. (I) (2) Pertaining to a functional unit or channel involved in an input process, output process, or both, concurrently or not, and to the data involved in such a process.

insert. To make an attaching device an active part of a LAN.

interface. (1) A shared boundary between two functional units, defined by functional characteristics, common physical interconnection characteristics, signal characteristics, and other characteristics as appropriate. (I) (2) A shared boundary. An interface may be a hardware component to link two devices or a portion of storage or registers accessed by two or more computer programs. (A) (3) Hardware, software, or both, that links systems, programs, or devices.

interference. (1) The prevention of clear reception of broadcast signals. (2) The distorted portion of a received signal.

J

jack. A connecting device to which a wire or wires of a circuit may be attached and which is arranged for insertion of a plug.

jumper cable. Synonym for *patch cable*.

L

LAN segment. (1) Any portion of a LAN (for example, a single bus or ring) that can operate independently but is connected to other parts of the establishment network via bridges. (2) An entire ring or bus network without bridges. See *cable segment, ring segment*.

layer. (1) One of the seven levels of the Open Systems Interconnection reference model. (2) In open systems architecture, a collection of related functions that comprise one level of hierarchy of functions. Each layer specifies its own functions and assumes that lower level functions are provided. (3) In SNA, a grouping of related functions that are logically separate from the functions of other layers. Implementation of the functions in one layer can be changed without affecting functions in other layers.

line data rate. The rate of data transmission over a telecommunications link.

lobe. In the IBM Token-Ring Network, the section of cable (which may consist of several cable segments) that connects an attaching device to an access unit.

lobe receptacle. In the IBM Token-Ring Network, an outlet on an access unit for connecting a lobe.

local area network (LAN). A computer network located on a user's premises within a limited geographical area.

Note: Communication within a local area network is not subject to external regulations; however, communication across the LAN boundary may be subject to some form of regulation. (T)

locally administered address. An adapter address that the user can assign to override the universally administered address. Contrast with *universally administered address*.

logical unit (LU). In SNA, a port through which an end user accesses the SNA network in order to communicate with another end user and through which the end user accesses the functions provided by system services control points (SSCPs). An LU can support at least two sessions, one with an SSCP and one with another LU, and may be capable of supporting many sessions with other logical units.

loop. A closed unidirectional signal path connecting input/output devices to a network.

M

main ring path. In the IBM Token-Ring Network, the part of the ring made up of access units, repeaters, converters, and the cables connecting them. See also *backup path*.

medium. A physical carrier of electrical or optical energy.

mesh network. A multiple-segment network configuration providing more than one path through intermediate LAN segments between source and destination LAN segments. Contrast with *hierarchical network*.

modulation. (1) The process by which a characteristic of a signal is varied according to a characteristic of another signal. (2) The process by which a message signal is impressed upon a carrier signal so that the carrier is altered to represent the message signal.

N

n-bit byte. A string that consists of n bits. (T)

network. (1) A configuration of data processing devices and software connected for information interchange. (2) An arrangement of nodes and connecting branches. Connections are made between data stations. (T)

network administrator. A person who manages the use and maintenance of a network.

network application program. A program used to connect and communicate with adapters on a network, enabling users to perform application-oriented activities and to run other application programs.

network architecture. The logical structure and operating principles of a computer network. (T) See also *systems network architecture (SNA)* and *Open Systems Interconnection (OSI) architecture*.

Note: The operating principles of a network include those of services, functions, and protocols.

Network Basic Input/Output System (NETBIOS). A message interface used on LANs to provide message, print server, and file server functions. The IBM NETBIOS application program interface (API) provides a programming interface to the LAN so that an application program can have LAN communication without knowledge and responsibility of the data link control (DLC) interface.

network management. The conceptual control element of a station that interfaces with all of the architectural layers of that station and is responsible for the resetting and setting of control parameters, obtaining reports of error conditions, and determining if the station should be connected to or disconnected from the network.

network management vector transport. The portion of an alert transport frame that contains the alert message.

network manager. A program or group of programs that is used to monitor, manage, and diagnose the problems of a network.

O

open. (1) To make an adapter ready for use. (2) A break in an electrical circuit. (3) To make a file ready for use.

Open Systems Interconnection (OSI). (1) The interconnection of open systems in accordance with specific ISO standards. (T) (2) The use of standardized procedures to enable the interconnection of data processing systems.

Note: OSI architecture establishes a framework for coordinating the development of current and future standards for the interconnection of computer systems. Network functions are divided into seven layers. Each layer represents a group of related data processing and communication functions that can be carried out in a standard way to support different applications.

Open Systems Interconnection (OSI) reference model. A model that represents the hierarchical arrangement of the seven layers described by the Open Systems Interconnection architecture.

operating system. Software that controls the execution of programs. An operating system may provide services such as resource allocation, scheduling, input/output control, and data management. (A) Examples are IBM PC DOS and IBM OS/2.

optical fiber. A small-diameter strand made from glass and/or polymer that consists of a core surrounded by a lower-index-of-refraction cladding. It guides light from one end to another by a combination of a graded index in the core and internal reflectance.

optical fiber cable. One or more optical fibers aligned with each other, with strengthening material and a protective cover.

option. (1) A specification in a statement, a selection from a menu, or a setting of a switch, that may be used to influence the execution of a program. (2) A hardware or software function that may be selected or enabled as part of a configuration process. (3) A piece

of hardware (such as a network adapter) that can be installed in a device to modify or enhance device function.

output device. A device in a data processing system by which data can be received from the system. (I) (A) Synonymous with *output unit*.

output unit. Synonym for *output device*.

overflow exception. A condition caused by the result of an arithmetic operation having a magnitude that exceeds the largest possible number. See also *underflow exception*.

P

page. (1) The portion of a panel that is shown on a display surface at one time. (2) To move back and forth among the pages of a multiple-page panel. See also *scroll*. (3) In a virtual storage system, a fixed-length block that has a virtual address and is transferred as a unit between real storage and virtual storage.

panel. The complete set of formatted information that appears in a single display on a visual display unit.

parameter. (1) A variable that is given a constant value for a specified application and that may denote the application. (I) (A) (2) An item in a menu or for which the user specifies a value or for which the system provides a value when the menu is interpreted. (3) Data passed between programs or procedures.

patch cable. A length of cable with data connectors at both ends that is normally used to interconnect two sections of building cable at a patch panel or to connect a product to the building cable. Synonymous with *jumper cable*.

patch panel. An organized concentration of cable terminations, usually mounted in a flat panel, that facilitates the interconnection of communication cables.

path. (1) In a network, any route between any two nodes. (T) (2) The route traversed by the information exchanged between two attaching devices in a network. (3) A command in IBM Personal Computer Disk Operating System (PC DOS) and IBM Operating System/2 (OS/2) that specifies directories to be searched for commands or batch files that are not found by a search of the current directory.

PC Network. An IBM broadband or baseband LAN with a bus topology in which messages are broadcast from PC Network adapter to PC Network adapter.

physical layer. In the Open Systems Interconnection reference model, the layer that provides the mechanical, electrical, functional, and procedural

means to establish, maintain, and release physical connections over the transmission medium. (T)

plug. (1) A connector designed to insert into a receptacle or socket. (2) To insert a connector into a receptacle or socket.

pointer. (1) An identifier that indicates the location of an item of data. (A) (2) A data element that indicates the location of another data element. (T) (3) A physical or symbolic identifier of a unique target.

port. (1) An access point for data entry or exit. (2) A connector on a device to which cables for other devices such as display stations and printers are attached. Synonymous with *socket*.

PROCEDURE. A set of instructions that gives a service representative a step-by-step procedure for tracing a symptom to the cause of failure.

protocol. (1) A set of semantic and syntactic rules that determines the behavior of functional units in achieving communication. (I) (2) In SNA, the meanings of and the sequencing rules for requests and responses used for managing the network, transferring data, and synchronizing the states of network components. (3) A specification for the format and relative timing of information exchanged between communicating parties.

R

rack. Synonym for *equipment rack*.

receptacle. Electrically, a fitting equipped to receive a plug and used to complete a data connection or electrical path. See also *lobe receptacle*.

remove. (1) To take an attaching device off a network. (2) To stop an adapter from participating in data passing on a network.

repeater. In a network, a device that amplifies or regenerates data signals in order to extend the distance between attaching devices.

ring in (RI). In an IBM Token-Ring Network, the receive or input receptacle on an access unit or repeater.

ring network. A network configuration in which a series of attaching devices is connected by unidirectional transmission links to form a closed path. A ring of an IBM Token-Ring Network is referred to as a LAN segment or as a Token-Ring Network segment.

ring out (RO). In an IBM Token-Ring Network, the transmit or output receptacle on an access unit or repeater.

ring segment. A ring segment is any section of a ring that can be isolated (by unplugging connectors) from the rest of the ring. A segment can consist of a single lobe, the cable between access units, or a combination of cables, lobes, and/or access units. See *cable segment*, *LAN segment*.

ring sequence. The order in which devices are attached to a ring network.

router. An attaching device that connects two LAN segments, which use similar or different architectures, at the reference model network layer. Contrast with *bridge* and *gateway*.

routine. Part of a program, or a sequence of instructions called by a program, that may have some general or frequent use.

routing. (1) The assignment of the path by which a message will reach its destination. (2) The forwarding of a message unit along a particular path through a network, as determined by the parameters carried in the message unit, such as the destination network address in a transmission header.

S

scroll. To move all or part of the display image vertically or horizontally to display data that cannot be observed within a single display image. See also *page (2)*.

segment. See *cable segment*, *LAN segment*, *ring segment*.

server. (1) A device, program, or code module on a network dedicated to providing a specific service to a network. (2) On a LAN, a data station that provides facilities to other data stations. Examples are a file server, print server, and mail server.

signal. (1) A time-dependent value attached to a physical phenomenon for conveying data. (2) A variation of a physical quantity, used to convey data.

socket. Synonym for *port (2)*.

soft error. An intermittent error on a network that causes data to have to be transmitted more than once to be received. A soft error affects the network's performance but does not, by itself, affect the network's overall reliability. If the number of soft errors becomes excessive, reliability is affected. Contrast with *hard error*.

source address. A field in the medium access control (MAC) frame that identifies the location from which information is sent. Contrast with *destination address*.

station. (1) A communication device attached to a network. The term used most often in LANs is an *attaching device* or *workstation*. (2) An input or output point of a system that uses telecommunication facilities; for example, one or more systems, computers, terminals, devices, and associated programs at a particular location that can send or receive data over a telecommunication line. See also *attaching device*, *workstation*.

subsystem. A secondary or subordinate system, or programming support, usually capable of operating independently of or asynchronously with a controlling system.

system. In data processing, a collection of people, machines, and methods organized to accomplish a set of specific functions. (I) (A)

system configuration. A process that specifies the devices and programs that form a particular data processing system.

Systems Application Architecture (SAA). An architecture developed by IBM that consists of a set of selected software interfaces, conventions, and protocols, and that serves as a common framework for application development, portability, and use across different IBM hardware systems.

Systems Network Architecture (SNA). The description of the logical structure, formats, protocols, and operational sequences for transmitting information units through, and controlling the configuration and operation of, networks.

Note: The layered structure of SNA allows the ultimate origins and destinations of information, that is, the end users, to be independent of and unaffected by the specific SNA network services and facilities used for information exchange.

T

telephone twisted pair. One or more twisted pairs of copper wire in the unshielded voice-grade cable commonly used to connect a telephone to its wall jack. Also referred to as "unshielded twisted pair" (UTP).

token. A sequence of bits passed from one device to another on the token-ring network that signifies permission to transmit over the network. It consists of a starting delimiter, an access control field, and an end delimiter. The access control field contains a bit that indicates to a receiving device that the token is ready to accept information. If a device has data to send along the network, it appends the data to the token. When data is appended, the token then becomes a frame. See *frame*.

token ring. A network with a ring topology that passes tokens from one attaching device (node) to another. A node that is ready to send can capture a token and insert data for transmission.

token-ring network. (1) A ring network that allows unidirectional data transmission between data stations by a token-passing procedure over one transmission medium so that the transmitted data returns to and is removed by the transmitting station. (T) The IBM Token-Ring Network is a baseband LAN with a star-wired ring topology that passes tokens from network adapter to network adapter. (2) A network that uses a ring topology, in which tokens are passed in a sequence from node to node. A node that is ready to send can capture the token and insert data for transmission. (3) A group of interconnected token rings.

topology. The physical or logical arrangement of nodes in a computer network. Examples include ring topology and bus topology.

trace. (1) A record of the execution of a computer program. It exhibits the sequences in which the instructions were executed. (2) A record of the frames and bytes transmitted on a network.

transmission medium. (1) A physical carrier of electrical energy or electromagnetic radiation. (2) The physical medium that conveys data between data stations; for example, twisted-pair wire, optical fiber, coaxial cable. (T)

twisted pair. A transmission medium that consists of two insulated conductors twisted together to reduce noise. (T)

U

underflow exception. A condition caused by the result of an arithmetic operation having a magnitude less than the smallest possible nonzero number.

universally administered address. The address permanently encoded in an adapter at the time of manufacture. All universally administered addresses are unique. Contrast with *locally administered address*.

unshielded twisted pair (UTP). See *telephone twisted pair*.

upstream. On an IBM Token-Ring Network, the direction opposite that of data flow. Contrast with *downstream*.

V

variable. (1) In computer programming, a character or group of characters that refers to a value and, in the execution of a computer program, corresponds to an address. (2) A quantity that can assume any of a given set of values. (A)

W

wideband. Synonym for *broadband*.

wiring closet. A room that contains one or more distribution panels and equipment racks that are used to interconnect cables. Sometimes called a *network wiring closet* to distinguish it from a telephone wiring closet.

wiring concentrator. A unit that allows multiple attaching devices access to the ring at a central point such as a wiring closet or in an open work area. A star-wired ring consists of one or more concentrators connected together to form a ring. See also *access unit*.

work area. An area in which terminal devices (such as displays, keyboards, and printers) are located. Access units may also be located in work areas.

workstation. (1) An I/O device that allows either transmission of data or the reception of data (or both) from a host system, as needed to perform a job: for example, a display station or printer. (2) A configuration of I/O equipment at which an operator works. (T) (3) A terminal or microcomputer, usually one connected to a mainframe or network, at which a user can perform tasks.