IX
Glossary

"The quality of simplification separates intelligent problem solvers from the also-ram." Arno Penzias, Ideas and Information

ASCII--h acronym for *American Standard Code for Information Interchange.* It is an information coding scheme used to present letters, numbers, and symbols.

AUTOEXEC.BAT--A file in ASCII which can be used to perform specified start-up procedures; the file is executed automatically by DOS each time the system is started or *booted.*

Back-up power supply--A device which can operate your computer after the main power supply fails. Most back-up power supplies operate for a short period of time to allow the computer user to save files and turn off the system.

Boolean--The term applied to logical statements based upon the mathematical forms and relationships of George Boole (181.51864). Search and retrieval using Boolean logic uses terms linked by AND, OR, and NOT to define the set of data retrieved.

Boot--Turn on the computer. There are two types: a hard boot (turn the power off and on) or a warm or soft boot (push the reset button or press at the same time the CONTROL, ALTERNATE, and DELETE keys).

Bundling--Providing all of the software and hardware in one package. In terms of CD-ROM, a bundled package would include the optical drive, program disc, interface cards, cables, CD-ROM, search-and-retrieval software, and instructions. Sometimes a microcomputer or workstation is included as part of the bundle.

Byte--The unit of measure for a computer memory. One byte has eight bits and can store one letter, number, or symbol.

CD-I--Compact Disc Interactive is an enhanced CD-ROM medium that uses a special drive which contains its own computer system. CD-I combines sound and graphics but with less flexibility than DVI.

CD-ROM--A sandwich of plastic and metal on which data are digitally encoded. The data are etched or burned into the metallic surface. The acronym stands for compact disc read-only memory.

CD-V--compact disc video is an analog device intended for home entertainment or educational applications. Think of it as a small format videodisc.

Cables, Coaxial--This type of cable provides mid-range performance and cost. It is recommended that coaxial cable be used in Ethernet configurations because coaxial supports higher data transfer rates.

Cables, Fiber-Optic--This is the cabling option of the future. Fiber-optic cables are reliable and support high data transfer rates. It is the most costly cabling option.

Fiber-optic cable provides excellent data security and is virtually immune to electrical interference. The price of fiber-optic cable is likely to decrease in the future.

Cables, Twisted-Pair--This cable is comprised of two wires twisted around each other over their length. The telephone companies use twisted-pair cable to wire houses for telephone service. It is often referred to as **UTP** or unshielded twisted pair. This is the most inexpensive type of cable to purchase and install. However, it does not support the high data transfer rates that other types of cables.

Central server--The computer used to support the network is called either the *file server* or the *central sewer*. Some networks do not have central servers. Instead each **PC** on the network shoulders some of the network duties.

CLV--Constant linear velocity is the term used to describe how the reading head of a *magnetic* floppy or hard disc operates. **CD-ROMs** do not use CLV. Instead the rotation of the disc speeds **up** and slows down depending on the location of the data and the position on the spiral, continuous track which contains the **CD-ROM's** digital information.

CONFIG.SYS--A file which **DOS** examines each time the system is started to obtain specific information about peripherals, memory enhancements, or such requirements as the number of files to keep open at one time.

CPU--The central processor unit is the chip set which provides the basic computing horsepower in a computer. It is usually located in the case containing the power supply and drives. There are many varieties of CPUs, but the ones most typically required to operate **CD-ROM** applications

are 80286 and 80386 chips from Intel or Motorola 68000, 68020, or 68030 chips.

Daisy-chain--A term used to describe hooking devices together with each one plugged into the unit in front of it.

Device control electronics--The circuits inside the CD-ROM drive which operate error correction, head movement, and data transfer to the electronic interface card in the PC.

Device control software--Software which tells the devices what to do. Particularly important in CD-ROM applications which are not typically supported by popular computer hardware and software.

Device integration--All the pieces fit together and work the way they are supposed to.

DOS--Disk operating system which allows an application program to use the computer's memory and peripherals. Computers can use different operating systems like UNIX or those provided by Apple Computer for its Macintosh system. Operating systems are tailored to fit specific computers. Not all are versions of the same operating system are interchangeable.

Disk manager--Software which provides help with operating-system commands or simplifies the user's interaction with the operating system. Examples of disk management software are Peter Norton's *Commander* and Westlake Data's *Pathminder*.

Drive--A rotating storage device. Drives may be magnetic, optical, or a combination.

DVI--Digital video interactive refers to technology developed by RCA to allow full motion video to be placed

on a **CD-ROM.** The technology is now owned by Intel and licensed to **IBM.**

Electronic interface--Hardware which allows one device to talk with another; for example, **CD-ROM** drives require a card which plugs into one of the slots inside the computer's case. This device translates instructions to and from the **CD-ROM** drive and the computer's memory.

File server--The computer used to support the network is called either the *fife sewer* or the *central server.* Some networks do not have central servers. Instead each PC on the networks shoulders some of the network duties.

Fixed disc--Also called a hard disc. A large capacity, magnetic storage device that cannot be removed from the computer.

Gigabyte--about a billion bytes.

Green Book-- Standards developed for **CD-ROM** manufacturers, developers, and vendors which describe the physical characteristics of compact-disc interactive **(CD-I)** discs and readers.

Hardware Protocols--In addition to software, a **PC LAN** requires a certain amount of hardware to operate. There are several ways that the hardware in a network can be organized and arranged for optimum performance. The most common types of networks are Ethernet, ARCnet, and Token Ring. These protocols are sometimes referred to as "topologies."

Hypertext--An indexing scheme that links information using index links normally invisible to the user. Hypertext allows the user to enter a keyword via keyboard or point to a object using a mouse. A linkage is activated, and the user sees information associated with the keyword.

Interface--The boundary between two entities; for example, the user and the computer or a **CD-ROM** drive and the computer.

K or **Kilobyte--1,024** bytes or about a thousand bytes

KWIC--Key Words in Context refers to the retrieval software's ability to highlight search terms or show only the portion of the retrieved record in which the search terms appear.

Laser--Light which is coherent and of one wavelength.

LAN--A local area network consist of hardware and software which links two or more computers in close proximity so they can share data, peripherals or computer resources.

Lands--On a **CD-ROM,** the space between the pits or cavities on the disc's surface.

License--The agreement between a **CD-ROM** vendor and a library defines the uses to which the data may be put and spells out ownership of the disc and data. The license is similar to a rental agreement, and it has terms and conditions which can restrict certain uses of the data and the disc. Some license agreements require that the library return **CD-ROM** discs when an update disc is received or when the disc subscription ends.

Line conditioner--A device which provides consistent, smooth power to a computer. This devices does not have the ability to power a computer during a power failure. Line conditioners are more costly but more effective than surge suppressors.

Microsoft Extensions--See MSCDEX.

MSCDEX--The software written by Microsoft to allow the **IBM** and IBM-compatible personal computers to address a **CD-ROM** drive as a single, big hard disk. These extensions have two parts: device-independent **CD-ROM** management software and device-specific **CD-ROM** software from drive manufacturers. The MSCDEX insulates developers from supporting different devices. To the computer, the **CD-ROM** appears as a magnetic fixed disk; therefore, network applications supporting IBM-compatible PCs can be adapted to address **CD-ROMs.**

M or **Megabyte**--1,048,576 or a million bytes.

MS-DOS--Microsoft disk operating system; functionally equivalent to PC-DOS

PC-DOS--Personal computer operating system; functionally equivalent to **MS-DOS**

Network--A term used loosely to refer to any sharing of data, peripherals, or computer resources.

PC--Acronym for any computer which can be used by an individual.

NIC--A *network interface card* must he installed in all workstations, file servers, database servers, and other microcomputers that communicate over the network. These cards provide the connection between the computer and the data source. The data move through a cable.

NOS--This is the software that allows programs on each computer in a network to access network resources like **CD-ROM.** Each microcomputer on a network must run special network software, different from the operating system used in a PC, to tell them how to communicate with other resources on the network.

Pits--Crevices burned into the master or pressed into the metallic surface of the **CD-ROM.**

KAM--Random access memory is the memory available to the computer user for application programs. The contents of this memory disappear when the computer is turned off. Most programs reside in RAM. When a computer is linked to a network, some of the network software resides in **RAM** and may leave insufficient memory for programs to operate.

Kohl--Read-Only Memory is any memory, either in the computer or on a disc which is permanently recorded. It is not lost when the power is turned off.

Pot-t--Cables connecting peripherals to **PCs** plug into sockets called ports. The port can take a wide range of forms and have a variety of plug configurations.

Read-only drive--A drive that has information permanently stored on the media. You cannot add to or change the data.

Read-write drive--A drive that works like a traditional floppy disc, which allows you to store information on the media when you want and retrieve it at any time.

Red Book--Standards developed for **CD-ROM** manufacturers, developers, and vendors which describe the physical level of the CD-ROM.

SCSI--An intelligent device interface with a single software driver for a single device. The acronym stands for Small Computer Systems Interface. This interface is the standard in the Macintosh world and now entering the IBM-compatible world as well. SCSI interfaces, however, are not standardized.

Server--A microcomputer or larger computer dedicated to the task of "serving" data to other microcomputers on a network. In addition to housing data and the network operating system, the server can also handle other kinds of requests from other computers on the network; for example, electronic mail.

Shareware--The term used to describe software which is available on pubic timesharing services like CompuServe or on a software CD-ROM like PC-SIG's. The software may be tested without charge. If the user wants to make use of the software on a regular basis, a fee must be paid to the person or company who created the shareware. Examples of superior shareware are PC-Write and Procomm 2.4.2.

Surge protector--An device which can protect a computer against a sudden increase in power. Most PC power supplies have surge protection built into them. If a sudden peak in power occurs and the PC fails to operate, it may be necessary to replace the computer's power supply, since the protection in that power supply good for one defensive action.

Turnkey system--Phrase applied to buying a complete system from one vendor. The idea is that the vendor arrives one day, opens the door, and sets up the system. The purchaser needs only *turn the key* to use the system.

Unbundling--Avendor allows you to pick and choose the specific individual components you want to buy. Some refer to this as *cafeteria-style* purchasing.

UNIX--An operating system developed by Ken Thompson and Dennis Ritchie at Bell Labs. UNIX is modular with a building block approach to software. It

features a rich assortment of tools and utilities and communicates with peripherals and software in a standardized way unlike MS-DOS. There are many varieties of UNIX now available.

VGA--The Video Graphics Array is an enhanced graphics implementation developed by IBM for its PS/2 line. VGA incorporates several resolution levels in a variety of modes. It is backwards compatible with previous IBM graphics standards, including CGA and EGA.

WAN--Wide-area network. Hardware and software which link two or more computers geographically dispersed. This dispersal can be within the same building, between buildings, across town, or around the world. The communications technologies used, the cost of the system, and the data transfer rates distinguish the LAN from the WAN.

WORM--Write-once read many times describes an optical drive which allows you to add data but not remove it from the media once it has been stored on the media. Some WORM are rewriteable which makes them more like magnetic floppies.

Yellow Book--An outline of the manufacturing requirements for CD-ROM discs.