MICROSOFT STRATEGY SEMINAR 1991

GLOSSARY

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MICROSOFT STRATEGY SEMINAR - 1991

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A

activate
To make an object, program, system, or device available for use.

active session
The session in which a user is currently interacting with the computer. Synonymous with foreground session.

active window
The window with which the user is currently interacting. The active window has a colored title bar and a yellow or shaded border and is usually the topmost window.

adapter
A piece of hardware that connects a computer and an external device.

address
A value that identifies the location of a register, a particular part of storage, or a network node.

addressability
The ability of a process to access code or data.

administrator
The person responsible for the design, planning, installation, configuration, control, management, and maintenance of a network or system.

Advanced Program-to-Program Communication (APPC)
An IBM-defined communication standard requiring an implementation of the SNA LU 6.2 protocol on a device conforming to IBM's SNA PU 2.1 definition (i.e., a multiple-session device). APPC allows interconnected systems to communicate on a peer-to-peer basis and share the processing of programs.

Advanced Windows

Refers to the combination of several technologies, including NT, DOS and Windows. Advanced Windows is *not* a planned packaged product. Advanced Windows, based on OS/2 3.0 (with NT), the Windows-32 API, and capable of spawning DOS sessions, will support a wide range of hardware platforms and new and existing applications.

AFX (Application Framework)

Application Framework, Microsoft's object-oriented development environment project. The AFX environment will include a series of object classes and a tool set for the building of applications. AFX Composer, one of the primary tools, will permit visual management of all graphical objects in the AFX object libraries.

AFX Composer

An interactive design tool for defining and manipulating graphical objects (primarily user interface components) in Microsoft's AFX object-oriented programming environment. In effect, the Composer acts as a "visual browser," as it provides for the actual display of graphical objects on the programmer's screen. In concert with the AFX object classes, the AFX Composer allows a programmer to visually lay out a user interface and, to some degree, specify its behavior--e.g. what menu items should do, what to do when a button is pushed, etc.

agent

A process performing tasks on objects in a computing environment. Typically, agents are employed to automate execution of tasks on behalf of users or other processes.

algorithm

A set of defined rules for the solution of a problem in a finite number of steps.

alias

(1) An alternative name used to identify an object. (2) A nickname set up by the net work administrator for a file, printer or serial device.

alphanumeric

Pertaining to a character set that contains letters, digits, and usually other characters, such as punctuation marks.

American National Standard Code for Information Interchange (ASCII)

The standard code used for information interchange among data processing systems and data communication systems. It has a set of 7-bit coded characters (8 bits including parity check). The ASCII set also contains control characters and graphic characters.

American National Standards Institute (ANSI)

An organization sponsored by the Computer and Business Equipment Manufacturers Association for establishing voluntary industry standards.

ANSI

See American National Standards Institute.

Application Programming Interface (API)

A set of exposed interfaces to operating system functions available for use by applications programs.

API

See Application Programming Interface.

APPC

See Advanced Program-to-Program Communication.

application

A program or set of programs that perform a task, for example, a payroll application.

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application-centric view

The traditional view of applications and data, in which users are forced to think of data files in terms of the applications programs that created them. The application-centric view restricts the user's flexibility in manipulating information and places user emphasis on the applications being used to manage information instead of on the information itself. Contrast with data-centric view.

archive .

A copy of one or more files or a copy of a database that is saved for future reference or for recovery purposes in case the original data is damaged or lost.

argument

A parameter passed between a calling program and a called program.

arithmetic overflow

A condition in which the result of a mathematical operation exceeds the storage or register capacity.

ASCII

See American National Standard Code for Information Interchange.

ASCIIZ

A string of ASCII characters where the string is ended with a byte containing zero.

assembler language

A programming language whose instructions are usually in one-to-one correspondence with machine instructions. It may also provide other facilities such as macroinstructions.

asynchronous

Lacking a regular time relationship; unexpected or unpredictable with respect to the execution of program instructions. Contrast with synchronous.

attribute

A characteristic or property, for example, the color of a line or the length of a data field.

attribute-based addressing

The ability to locate and access information on a network by specifying one or more attributes of the data. For example, someone wishing to find a file recently created by a colleague might specify some combination of the author's name, type of file, likely date and time of initial creation and last modification, etc. in order to locate the file if its name were not known. Attribute-based addressing introduces more freedom into the search process. Compare with content-based addressing.

authentication

The process of confirming the identity of a user or agent attempting a network logon or attempting to access network resources.

authorization
The right granted to a user to communicate with or make use of a computer system.

autodial
A feature that enables a machine to automatically dial a number to establish a switched connection without user action.

B

backup
(1) To copy information onto a diskette or fixed disk for record keeping or recovery purposes; (2) An OS/2 command that saves files.

bandwidth
(1) The difference, expressed in hertz, between the highest and the lowest frequencies of a range of frequencies. (2) Industry jargon for the ability of people to cope with a number of tasks, not all of which may be related.

BASIC
See Beginner's All-Purpose Symbolic Instruction Code.

Basic Input/Output System (BIOS)
Software developed by IBM (usually contained in ROM) that provides the interface between the PC's operating system and the input/output bus.

batch file
A file containing DOS commands organized for sequential processing while in DOS mode. For OS/2 mode, see command file.

Beginner's All-Purpose Symbolic Instruction Code (BASIC)
A high-level programming language with a small number of statements and a simple syntax that is designed to be easy to learn. BASIC is widely used for interactive applications on personal computers. Bill Gates and Paul Allen wrote the first BASIC for personal computers in 1978.

beziers

Mathematical constructs for describing curves. Graphical support for bezier curves will be a feature of the Windows-32 graphical shell. Beziers provide a fast, accurate construct for drawing complex graphic shapes.

binary standard

In API that has been uniquely defined at the bit level. A binary standard enables developers to create code with absolute confidence in the uniformity of the target interface across all machines supporting the binary standard. In layperson's terms, this means that developers can write a single application that can run on any system adhering to the binary standard. It also means software retailers have to stock only one version of a product to satisfy customers owning any of those systems.

Binary Interchange File Format (BIFF)

A format that lets you maintain all formatting information when you cut and paste information between Microsoft Excel worksheets. The SYLK and DIF spreadsheet formats lack the ability to describe the many attributes a Microsoft Excel worksheet can have, such as multiple fonts and sizes, variable-size columns and rows, cell borders, custom data formats, and so on.

bimodal

Pertaining to both the DOS environment and the OS/2 environment.

binary

Refers to the base-two system of numbers. The binary digits are 0 and 1.

BIOS

See Basic Input/Output System.

bit

A binary digit (either 0 or 1).

bitmap

A representation in memory of a screen image.

bits per second (bps)

In serial transmission, the speed at which bits are transmitted.

block

(1) A string of data elements recorded or transmitted as a unit; (2) to wait, usually for an I/O event to finish or for a resource to become available.

block size

The number of records, words, or characters in a block.

bps

See bits per second.

breakpoint

A specified location where program execution will halt during debugging. A breakpoint can be set within a program such that the program will stop at the breakpoint, allowing the programmer to analyze program execution to that point.

bridge
In a LAN, a device that links one network to another of the same type.

buffer
A memory area reserved for use in performing input/output operations.

button
A mechanism on a pointing device, such as a mouse, used to request or initiate an action.

byte
The amount of storage required to represent one character.

bytes per sector
A term used to identify the number of bytes that can be stored on a sector of a fixed disk or diskette.

C

call
The action of bringing a computer program, routine, or subroutine into effect, usually by specifying the entry conditions and an entry point.

capture
To gather data and save it in a file.

capture to file
A feature of ASCII Terminal Emulation that allows the user to save data received from a remote location into a file.

carriage return
An operation that prepares for the next character or cursor to be printed or displayed at the specified first position on the next line.

case-sensitive
A condition in which entries for an entry field must conform to a specific lower-, upper-, or mixed-case format in order to be valid.

CD-I
Compact disc-interactive.

CD-ROM
Compact disc read-only memory.

CGA
Computer graphics adapter.

character
A letter, digit, or other symbol that is used as part of the organization, control, or representation of data.

character box
In computer graphics, the rectangle or the parallelogram (for sheared characters) boundaries that govern the size, orientation, spacing, and italicizing of individual symbols or characters to be shown on a display screen or printer page. See also character cell.

character cell
The rectangular space in which any single character is displayed on a screen or printer device. The position is addressed by row and column coordinators. See also character box.

character code
The means of addressing a character in a character set.

character display
A display that uses a character generator to display predefined character boxes of images (characters) on the screen.

character set
A group of characters used for a specific reason; for example, the setup characters a printer can print or a keyboard can support.

character string
(1) A sequence of bytes or characters associated with a single byte character set. (2) A sequence of printable characters (3) A string of characters, such as a command and its parameters, used to communicate with the operating system.

character-based interface
The traditional, keyboard-driven user interface common to DOS-based applications software.

check box
A square button used on graphics screens that is displayed before selected. Contrast with radio button.

check mark
A symbol used on a graphics screen to indicate that users have selected an item.

checksum
(1) The sum of a group of data associated with the group and used for checking purposes. (2) On a diskette, data written in a sector for error detection purposes; a calculated checksum that does not match the checksum of data written in the sector indicates a defective sector.

child process
In the OS/2 program, a dependent process that is created by another process. Contrast with parent process.

child window
A window that is positioned relative to another window (either a main window or another child window). Contrast with parent window.

class (object class)

In an object-oriented programming environment, defines the data content of a specific type of object, the code that manipulates it, and the public and private programming interfaces to that code. As part of its AFX project, Microsoft will ship collection classes, utility classes, operating system wrappers and higher-level classes that will facilitate the development of GUI applications.

click
To press and release the select button on a pointing device.

client (requester)
A workstation that utilizes the services of any type of server on a network.

client process
In Presentation Manager and Windows, a process that uses a service or dynamic-link library. A process is a client of the service or library.

client-server

A mode of distributed computing in which an application is executed cooperatively by two computers on a network. In true client-server computing, one component of the application (the front-end, or client process) executes on one node, while the second component (the back-end, or server process) runs on a second node. Client-server computing can occur between all sizes of computing systems. Between two personal computers, communications between the nodes is most frequently implemented using the Named Pipes interprocess communication protocol standard. Among the benefits of client-server computing are more effective use of computing resources, higher performance, greater flexibility, simpler and less costly upgrades and in some applications, greater reliability and data integrity. See also distributed computing and named pipes.

clipboard
In Presentation Manager and Windows, an area of memory that holds data being passed between documents and from one program to another.

clipping
In computer graphics, removing parts of a display image that lie outside a given area.

close
(1) To end an activity and remove it from display. (2) To end the processing of a file or device.

cluster
(1) A station that consists of a control unit (a cluster controller) and the terminals attached to it. (2) On an IBM®Personal Computer, a particular measure of space on a diskette for files allocated in cluster increments.

C++

Object-oriented version of the "C" programming language.

coaxial cable

A cable consisting of one inner conductor, usually a small copper tube or wire, within and insulated from another conductor of larger diameter, usually copper tubing or copper braid.

code

(1) A set of instructions for the computer. (2) To write instructions for the computer. (3) A representation of a condition, such as an error code.

collection classes

One of the basic, building block categories of object classes in an object-oriented system. Collection classes deal with the storage and manipulation of information. Each class defines objects whose job is to keep track of other objects. Typical examples: list class, indexed list class, ordered list class.

column

(1) A vertical arrangement of data. (2) An individual data item within a row or record; the logical equivalent of a field.

column name

A unique name given to each column of a table in a database.

COM

A representation of one of the serial communications ports supported by the OS/2 program (COM1, COM2, COM3).

Comma-separated variable (CSV)

A format intended primarily for representing spreadsheet or database information. In the CSV format, each cell (or field, for a database) is separated, or delimited, by a comma, and each row (or record, for a database), is delimited by a carriage-return code. When a given field contains embedded commas– a large number, perhaps, or a full name in last-name-first order– you enclose it within quote marks, as in "10,000,000" or "Polk, Helen". Many computer languages, including Microsoft BASIC, create data files in the CSV format.

command

The name and any parameters associated with an action than can be performed by a program. The command is entered by the user; the computer performs the action requested by the command name.

command file

A file containing OS/2 commands organized for sequential processing while in OS/2 mode. For DOS mode, see batch file.

command interface

The method used to enter commands at the OS/2 or DOS prompt.

command prompt
A displayed symbol (such as "C>") that requests input from a user.

common macro language

A simple, but powerful computer language capable of being used with a variety of applications. In Microsoft's concept of a common macro language, this tool will be integrated into a wide range of applications and will be included with the operating system. A common language will be easier to use than the multiplicity of macro languages in use today and will enable users to tie together functions from different applications to produce powerful new capabilities.

Communications Manager
An IBM-proprietary component of OS/2 Extended Edition that lets a workstation connect to a host computer and use the host resources as well as the resources of other personal computers to which the workstation is attached, either directly or through a host. Communications Manager provides APIs so users can develop their own applications.

communication port
(1) An access point for data entry to or exit from a communication device such as a terminal. (2) On a personal computer, a serial port to which a modem can be attached.

compile
(1) To translate a program written in a high-level programming language into a matching language program. (2) The computer actions required to transform a source file into an executable object file.

compiler
A program that takes the words that a programmer has written and translates them into a format the computer understands.

Composer

See AFX Composer

compound document

A document composed of a variety of data types and formats. Each data type is associated with the application that created it. Compound documents are created today via the traditional cut-and-paste procedure of moving information between files. Each time the user wants to change data, he or she must exit the compound document, return to the native application of the data to be changed, make the changes and then repeat the cut and paste procedure. However, in the future, embedding will permit the creation of compound documents in which each data type can be modified without changing application contexts. Users will be able to simply summon the originating application directly, while remaining inside the document being worked on, to make the desired changes. See linking and embedding.

Computer-based training (CBT)
Tutorial programs, such as Learning MS-DOS® or Learn Word that a new user can run and interact with to learn a specific application, operating system or language product.

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concurrency
(1) The shared use of resources by multiple interactive users or application programs at the same time. (2) When more than one user accesses a particular use of records or files at the same time.

concurrency control
A feature that allows multiple users to execute database transactions simultaneously without interfering with each other.

concurrent
Referring to the occurrence of two or more activities with a given interval of time.

configuration
The task of defining the devices, features, parameters, and programs for a system. Synonymous with customize.

configuration file
(1) For the base operating system, the CONFIG.SYS file that describes the devices, system parameters, and resource options of a workstation. See also CONFIG.SYS. (2) Files that perform similar functions for other applications or system programs.

CONFIG.SYS
A text file that contains configuration options under DOS, Windows and OS/2 operating systems. The CONFIG.SYS file defines device drivers, path information, etc. Under OS/2, it also specifies items such as total threads available for allocation to system processes within the maximum permitted by the operating system. See also configuration file.

congestion
An overload condition caused by traffic in excess of the capabilities of a network.

connectivity
A general term that refers to the ability of different classes of computers to communicate with one another.

consistency of data
A feature of databases that ensures that no transaction can see another transaction's uncommitted updates.

consistent
A term that describes a database in which correct and nonconflicting information is supplied to users.

constant
A fixed value.

Consultative Committee for International Telephone and Telegraphy (CCITT)
An international standards group that makes recommendations in the data communications area.

content-based addressing

The ability to locate and access information on a network by describing the data itself. Content-based addressing is normally considered a superset of attribute-based addressing. For example, someone wishing to find a file recently created by a colleague might specify some combination of the name of the author, type of file, etc. (file attributes) and a description of the subject matter in order to locate the file if its name were not known. The computer assists the user's browsing to the full extent of the user's ability to describe the data sought. Compare with attribute-based addressing.

contention
In a local area network, a situation in which two or more data stations are allowed by the protocol to start transmitting concurrently and thus risk collision.

context
The environment in which a program processes functions.

context-sensitive
Most often used in reference to a help system, such as QC Advisor. It means that the help system knows what the user is doing at the time the user requests help and displays the information relevant to the user at that point rather than just offering a long list of options.

control (Ctrl) mode
A mode that is obtained by pressing and holding the Ctrl key; this places the keyboard in a special mode, in which pressing a second key enables predefined functions.

Control Panel
A function of the OS/2 program that is used to set up user preferences, such as color on a screen.

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

coprocessor
A microprocessor that extends the address range of the processor in the system unit or adds specialized instructions to handle a particular category of operations; examples include an I/O coprocessor, a math processor, and a networking processor.

Corporation for Open Systems (COS)
An industry sponsored group of computer manufacturers and users that promotes the adoption of international standards in communications, particularly the ISO Reference Model for OSI and ISDN.

correlations

A programming approach to detect the graphical object that has been selected by a user with a pointing device such as a mouse. Simplifies graphical application development.

country code
(1) A 3-digit number specifying a country and that country's preferred formats for date and time values, currency, and numeric data. (2) In Asynchronous Communications Device Interface (ACDI), a number specifying a country that is used to enforce specific country requirements for connecting to telephone networks.

critical section
A part of a program that must execute without interruption.

cursor
A symbol displayed on the screen and associated with an input device, used to indicate where input from the device will be placed.

Cut
A function common to Presentation Manager and Windows that moves a marked section of text to the clipboard.

cut-and-paste

A method of moving a portion of a document or file into another document or file, which could be in an application different from the source.

cylinder
(1) The fixed disk or diskette tracks that can be read or written without the disk drive or diskette drive read/write mechanism. (2) The number of tracks for space allocation.

D

data-centric view
A new view of applications and data in which multiple applications programs work with a single document. The data-centric perspective is founded on the belief that the user's primary focus is information, and that he or she should not be forced to think of data from an applications-centric view, in which each file must be considered in terms of the application that created it. See also applications-centric view.

data integrity

Accuracy and reliability of data. Data integrity is important in both single-user and multiuser environments. In multiuser environments, where data is shared, both the potential for and the cost of data corruption is high. In large-scale DBMS environments, data integrity becomes one of the primary concerns and focuses of database management systems. With more sophisticated database management systems, transaction logging, as well as other features such as stored procedures and triggers, provide the mechanisms to maintain data integrity. In the DOS environment, data integrity is maintained only by manually saving files.

Data Interchange Format (DIF)
A file format developed by VisiCorp, applicable for spreadsheet analysis and database management. The DIF file format debuted with VisiCorp's pioneering VisiCalc spreadsheet program. It is still supported by most spreadsheet applications and by many database managers. A DIF file consists of ASCII text records that represent a row-and-column grid of unformatted numeric and text values.

data link
A physical link, such as a wire or a telephone circuit, that connects one or more devices or communication controllers.

Data Link Control (DLC)
A specification that defines the interface and services provided by the upper half of the Link layer of the ISO reference model. In IBM parlance a set of APIs used to access 802.2 data link services. Commonly used by 3270 terminal emulator programs to gain access, over a token Ring network, to 3270 services on a SNA network.

data sharing
User's ability to share transparently individual pieces of data in a database across different applications.

data type
An attribute used for defining data.

database
A collection of information or data files that is organized and presented to serve a specific purpose.

Database Management System (DBMS)
A computer program that manages data by providing the services of centralized control, data independence, and complex physical structures for efficient access, integrity, recovery, concurrency control, privacy, and security. A DBMS enables users to perform a variety of operations on those files, including retrieving, appending, editing, and updating files and generating reports based on them.

Database Manager
An IBM-proprietary component of OS/2 Extended Edition consisting of Database Services and Query Manager. Database Manager is based on the relational model of data and allows users to create, update, and access databases.

database server
Software that provides high-performance database access (such as SQL Server from Ashton-Tate and Microsoft) by splitting the DBMS function into a front-end component, where data is manipulated by users or applications, and database-intelligent back-end component, where data is stored, retrieved and managed, integrity is managed, and security is controlled. In networks of personal computers, the front-end component often resides on a personal computer controlled by a single user, while the back-end component resides on a high-performance PC that services requests for data submitted by PC users over the network.

database tools
Utilities that enable manipulation of a database, such as import, export, and restore.

DB2
IBM's relational database system that runs on System 370-compatible mainframes. DB2 works in conjunction with IMS and CICS communication environments, as well as under TSO.

dBASE®
The brand name of the series– dBASE II®, dBASE III®, dBASE III Plus', dBASE IV'– of software products from Ashton-Tate Corporation that has been the market leader in microcomputer database management systems since 1981. dBASE/SQL is also the name of the applications development language contained in dBASE IV.

DCE
See Distributed Computing Environment

DDE
See Dynamic Data Exchange.

deadlock
An unresolved contention for the use of a resource, such as a table, index, or file. Synonymous with hang.

decision support
Computer software that allows end-users to access and exploit computing capabilities for decision analysis and other decision-making. Such usage typically does not require programming skills.

dedicate
To assign a system resource, for example, an I/O device, a program, or a whole system, to one application or purpose.

dedicated server
A personal computer on a network that functions only as a server, not as a requester and server.

default
An attribute, value, or option assumed when none is explicitly specified.

default choice
A highlighted and selected choice provided by a program when a panel is initially displayed.

default procedure
In some Presentation Manager and Windows dialog boxes and windows, the function that is preselected as the most logical or safest choice.

demand paging
A technique which allows programs to use more memory then is physically in the computer. Operating systems which support demand paging move program and data values between main memory and disk as needed in the course of execution.

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device context
In Presentation Manager and Windows, a logical description of data destination such as memory, metafile, display, printer or plotter.

device driver
The executable code needed to attach and use a device such as a display, printer, plotter, or communications adapter.

device name
A name reserved by the system or a device driver that refers to a specific device.

diagnostic diskette
A diskette used by computer users and service personnel to diagnose hardware problems.

dialog
(1) The interaction between a computer and its user. (2) The interaction of the user with a predefined set of panels or window displays requiring navigation control through a structured hierarchy.

dialog box
A marked-off area of the screen that requires the user to enter a response or to choose among many choices through a graphical user interface.

dialog item
In Presentation Manager and Windows, a component (for example, a menu or a button) of a dialog box. Dialog items are also used when creating dialog templates.

Direct Access Storage Device (DASD)
IBM terminology for fixed-disk drives.

direct connect
A type of connection in which two computers are physically connected by a cable. No modems are required with this type of connection.

directory
A named grouping of files in a file system.

directory service (DS)

A network facility that provides information on resources available on the network, including files, users, printers, data sources, applications and so on. The directory service provides users with easy access to resources and information on extended networks.

disk
A magnetic disk unit. See also diskette.

disk operating system (DOS)
An operating system for computer systems that uses fixed disks and diskettes for auxiliary storage of programs and data.

diskette
A disk enclosed in a protective container. See disk.

display
A visual presentation of data.

distributed computing

Use of an advanced operating system to process computing tasks in the most efficient manner possible by utilizing the aggregate computing power of the network nodes. In true distributed computing, a distributed operating system provides for the systematic decomposition of application processing requirements to allow the components to be allocated among all available processors. In distributed computing systems, many applications typically require interactive give-and-take of resources between two or more nodes. Today, Microsoft offers client-server applications that rely on cooperative processing between two computers (a client and a server)--the initial step toward fully distributed computing.

Distributed Computing Environment (DCE)

The networking software standard proposed by the Open Software Foundation (OSF). OSF has selected LAN Manager for UNIX®as one component of its DCE definition.

distributed file system (DFS)

A type of file system in which the file system itself manages and transparently locates pieces of information from remote files and distributes those files across a network to the user. The file system can recognize multiple servers and be accessed independent of the user's network location. From the user's perspective, the DFS removes the complexity of the storage resources on the network, making them appear in aggregate to be a giant disk drive linked directly to the user's desktop.

distributed intelligence

The capability of a distributed operating system to respond dynamically to changing environmental conditions. As a simplistic example, a wide area network system might respond to frequent access of a file located in New York by users in San Francisco by temporarily locating a copy of the file in San Francisco. Similarly, the network might reconfigure communications and other resources to reflect evolving traffic loads.

distributed MAKE

A development utility that executes across multiple computers. Typically, a large program is developed by many programmers, each creating code modules on one or several systems. A distributed MAKE program is an example of an application making more effective use of a network.

distributed operating system

An operating system that is physically distributed on multiple computers in order to provide seamless integration of these machines. Each portion of the operating system works in concert with all other portions in the network to maximize the computing resources to users of the combined computer systems. A distributed operating system overcomes the difficulties created by the physical separation of programs and data across multiple computers while exploiting the inherent advantages of higher performance and fault resilience possible with a decentralized computing environment.

distributed processing

Data processing in which some or all of the processing, storage, and control functions, in addition to input/output functions, are situated in different places and connected by transmission facilities. The transparent access of both applications and data by programs and end users is an important goal of distributed processing systems.

distributed security

A user authentication system that provides for distributed processing of user logons and user resource access requests. Distributed security is provided for each domain in LAN Manager 2.0 networks, and serves to balance the user logon processing burden evenly between all available authentication servers. The result is faster user authentication and higher system, since the network is not dependent on any one server for logon validations.

distributed system services

Distributed implementations of normal, standalone operating system services, together with services relevant only to a distributed computing environment, such as system fault recovery. The benefits of distributing services across multiple platforms include access to greater resources, higher performance, more effective use of computing investments and higher reliability.

DLC

See data link control.

DLL

See dynamic-link library.

Document Content Architecture (DCA)

A format developed by IBM, applicable for word processing. The DCA format, also called Revisable Form Text (RFT) format, was developed for exchanging formatted word processing documents between different word processing and office automation systems. In the microcomputer world, it's supported by IBM's Display Write 3 word processor and by many other word processors, including Samna Word III, Volkswriter 3, and WordStar®2000. You can also convert Microsoft Word files to DCA format by using the Word Exchange file translation utility from Systems Compatibility Corporation.

domain

A logical grouping of nodes in a network, identified to simplify network operation and improve performance. In LAN Manager, user-specified domains may be employed to simplify administrative tasks, simplify the user logon procedure for both the user and the LAN itself, and assist in the control of network traffic flow.

DOS

See disk operating system.

double-byte character set (DBCS)

(1) A set of characters used by national languages such as Japanese and Chinese that have more symbols than the 256 characters that can be represented by a single byte. Each character is two bytes in length. (2) A set of characters in which each character is represented by two bytes.

double-click

To press and release the select button on the pointing device twice in rapid succession.

download

To move data or programs from a host computer to a workstation.

downsizing

Implementation of applications programs traditionally based on host computer systems, such as minicomputers and mainframes, on systems comprised of networked personal computers.

dragging

Moving an object on the display screen as if it were attached to the pointer, performed by holding the select button and moving the pointer. See also drop.

drive

The device used to read and write data on fixed disks or diskettes.

drop

To fix the position of the object that is being dragged by releasing the select button on the pointing device or mouse. See dragging.

dump

To copy data from memory onto an external medium such as a diskette or printer.

duplex

Communication in which data can be sent and received at the same time.

duration

An interval of time, as in simple duration, date duration, or time duration.

DV-I

Digital video-interactive.

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dynamic (priority)
In the OS/2 program, a priority of a process that is varied by the operating system.

Dynamic Data Exchange (DDE)
Uses Windows' messaging system to create a "hot link" between applications. When you combine DDE-supporting applications, you can create dynamic documents, the contents of which are updated as data changes.

Dynamic-Link Library (DLL)
An OS/2 feature that allows executable code modules to be loaded on demand and linked at run time. This lets library code be field-updated transparent to applications and then unloaded when they are no longer needed.

dynamic linking
In the OS/2 program, the delayed linking of a program to a routine so that the routine is not linked until load or run time.

dynamic recovery
A routine or set of programs that detects and/or attempts to correct software failures and losses of data integrity within a DBMS. Generally, those programs execute without need for a system restart of the DBMS. Contrast with static recovery.

E

EBCDIC
See Extended Binary-Coded Decimal Interchange Code.

echo mode
In data communications, a mode in which characters are automatically returned to the transmitting data terminal equipment (DTE). Also known as echoplex mode.

EGA
Enhanced graphics adapter.

Extended Industry Standard Architecture (EISA)
A 32-bit bus standard proposed by a coalition of personal computer vendors.

ellipsis
A symbol (...) used on a panel indicating that an additional pop-up panel follows.

embedded SQL
SQL statements embedded within a program and prepared before the program is executed.

EMS
Expanded memory specification. See expanded memory.

emulation
The imitation of all or part of one system by another so that the imitating system accepts the same data, executes the same programs, and achieves the same results as the imitated computer system.

enable
(1) To make functional. (2) The state of a processing unit that allows the occurrence of certain types of interruptions. (3) In the OS/2 program, to initiate the operation of a circuit or device.

encapsulation
In object-oriented programming, the grouping of data and the code that manipulates it into a single entity (an object). Encapsulation leads to greater modularity and maintainability as changes to an object in a software system are localized to the object itself. If a change is made to an object class, all instances of that class (i.e., objects) inherent that change. Encapsulation is one of the benefits of object-oriented programming.

Encapsulated PostScript®(EPS)
Developed by Altsys Corporation, a developer of font utilities and a PostScript drawing program for the Apple®Macintosh® applicable for illustration, image scanning, and desktop publishing, where the final product is printed on a PostScript printer. EPS files contain programs in the PostScript page-description language and are usually used to add illustrations or special text effects to desktop publications. Many programs that accompany scanners can save images in EPS format. A full EPS file contains not only the PostScript code that creates a given image but a Windows metafile that allows the desktop publishing program to display an approximation of the effect on screen. Whether an EPS file contains a metafile depends on the application that created it. If an EPS file doesn't contain a metafile, the desktop-publishing program instead probably displays a box that indicates the PostScript image's boundaries.

error log
A file that stores error information for later access.

error
An unexpected result from a program command or action.

executable file
A set of machine-readable code resulting from assembling or compiling and linking a program.

exit list
In an OS/2 program, a list of subroutines that receive control from the base operating system when a particular process ends, either normally or abnormally.

expanded memory

The Lotus®-Intel®-Microsoft Expanded Memory Specification is a functional definition of a bank-switched memory-expansion subsystem. It comprises hardware expansion modules and a resident driver program (an expanded memory manager) specific to those modules. The expanded memory is made available to application software as 16Kb pages, mapped into a contiguous 64Kb area called the page frame, somewhere above the main memory area used by MS-DOS/PC-DOS (0 to 640Kb). Typically, the page frame is loacted in the address space between 640Kb and 1Mb. The EMS provides a uniform means for applications to access as much as 8Mb of memory. Applications not designed to interact with an expanded memory manager are unable to use expanded memory.

Extended Binary-Coded Decimal Interchange Code (EBCDIC)

A coded character set consisting of 8-bit coded characters used by many IBM computers. The format differs from ASCII.

extended memory

The term used by IBM to refer to the memory at physical addresses above 1Mb that can be accessed by an 80286 CPU in protected mode. Current versions of MS-DOS run the 80286 in real mode (8086-emulation mode), and extended memory is therefore not directly accessible. However, versions of Windows beginning with 3.0 take full advantage of extended memory, including all memory above 640kb, when running in standard or enhanced mode. A driver program (an extended memory manager) is necessary to run Windows in standard or enhanced mode and access extended memory. Windows includes the extended memory manager HIMEM.SYS. Applications do not have to be customized to interact with an extended memory manager to gain the benefit of extended memory under Windows.

Extended Industry Standard Architecture (EISA)

A 32-bit bus standard proposed by a coalition of personal computer vendors.

external macro language

See common macro language.

external macro programming

The use of a macro language external to an application to customize and extend the application's capabilities. See common macro language.

F

fast path

A way to navigate through panels using shortcuts. Fast paths include numbers, mnemonics, and function keys.

fault tolerance

Ability of a system or subsystem to recover from an error, failure or change in environmental conditions (such as loss of power). True fault tolerance provides for fully automatic recovery without disruption of user tasks or files, in contrast to more manual means of recovery, such as restoring data lost due to a disk drive failure via the use of tape backup files. Implementation of true fault tolerance usually involves the complete duplication of all hardware and attendant software processes. It is still relatively rare due to the cost and complexity of mirroring and synchronizing all system components. On the other hand, fault tolerance is often built into systems on a more limited basis for functions at greater risk of failure. For example, fault tolerance is commonly implemented for data storage at the device or subsystem level; for communications at the device and line level; and for power supplies at the system level.

FAT

See File Allocation Table.

FDDI

See Fiber Distributed Data Interface.

Fiber Distributed Data Interface (FDDI)

An ANSI standard specification for high-speed, fiber-optic local area networks with speeds up to 100 Mbits/sec.

field

(1) An area in a record or on a panel used to contain data. (2) An individual data item within a row or record. The logical equivalent of a column.

file

(1) A collection of related data that is stored and retrieved by an assigned name. Synonymous with data set. (2) A collection of rows (or records) that have associated columns (or files). The logical equivalent of a table.

File Allocation Table (FAT)

In IBM Personal Computers, a table used to allocate space on a disk for a file and to locate and chain together parts of the file that may be scattered on different sectors so that the file can be used in a random or sequential manner.

File Control Block (FCB)

A record that contains all of the information about a file for example, its structure, length, and name.

file server

A network node, usually consisting of fixed-disk storage and a CPU, that stores programs and data shared by users on a network. File servers offer operating system-level file and/or print capabilities, while database servers provide database intelligence such as transaction processing, indexing, logging, security, and so on.

file service

Network storage and sharing of data files, typically provided to network nodes by a file server. Simple file services do not represent an example of distributed system services--or truly effective use of the network--because the server acts merely as a data repository and does not contribute any intelligence to a given transaction. By comparison, a database server typically employs some local intelligence to retrieve specified data as requested by another network node, often a few records that are part of a larger file. When this transaction involves local intelligence at both the server and the requesting node, as is the case with Microsoft's SQL Server RDBMS, it may be characterized as client-server computing--a step toward fully distributed computing. See also print service. Compare to client-server computing.

file system
The collection of files and file management structures on a physical or logical mass storage device such as a disk.

filespec
The name and location of a file. The format is dependent on the storage medium of a file, for example, c:\path\filename.ext.

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

flag
(1) A modifier that defines the action of a command. (2) The action or return from a command.

flow control
In communications, the process of managing the amount of data that passes between components of the network. See also pacing.

font
A particular style of typeface that contains definitions of character sets, market sets, and pattern sets.

foreground program
The program with which the user is currently interacting.

foreground session
See active session.

foreign key
A column (or combination of some columns) whose values are required to match a primary key in some table.

format
(1) A specific arrangement of a set of data. (2) In a base operating system (both DOS and OS/2), a command used to initialize a diskette.

formatted diskette
A diskette on which track and sector control information has been written. Contrast with unformatted diskette.

fourth generation languages (4GLs)
Special-purpose nonprocedural programming languages designed for specific environments such as database access.

full-screen application
An application program that uses a screen group. It cannot run in a window.

full-screen mode
A form of screen presentation in which the contents of an entire screen can be displayed at once.

G

GDI
See Graphics device interface.

Global Descriptor Table Register (GDTR)
An internal storage location in the 80286 and 80386 microprocessors that points to a table that defines the virtual address space available to all tasks.

global object storage system

An enterprise-wide distributed file system with additional, integrated services enabled by object file system storage of data, such as attribute- and context-sensitive information retrieval. See attribute-based addressing and context-based addressing.

glyph
A graphic symbol whose appearance conveys information.

Go

Go Corporation, developer of the Penpoint operating system. Penpoint is specifically designed to support computer data entry via a pen-like input device.

Graphic Device Interface (GDI)
Provides a complete vocabulary of commands for displaying text and accessing all the fonts a user has installed in all their styles and point sizes. GDI also tells a Windows application how to draw lines, circles, and other shapes. When a Windows application needs to send information to the display or printer, it uses GDI commands. Windows sends those commands to the device driver, and the driver translates them into the specific commands the hardware needs.

graphics
A picture defined in terms of graphics primitives and graphics attributes.

graphics attributes
The attributes that apply to graphics primitives. Examples are color selection, line type, and shading pattern definition.

graphics-based interface
An interface that enables users to operate a computer by selecting menu options by pointing at a graphic icon with a mouse and clicking the mouse button.

graphics model space
The conceptual coordinate space in which a picture is constructed after any model transformations have been applied.

graphics primitive
A single item of drawn graphics, such as a line, arc, or graphics text string. See also graphics segment.

graphics segment
A sequence of related graphics properties and graphics attributes. See also graphics primitive.

group
In Presentation Manager, a collection of logically connected controls; for example, the buttons controlling paper size for a printer. In Windows, a collection of applications in the Program Manager window. See also program group.

GUI
Graphics-based user interface or graphical user interface.

H

hang
See deadlock.

hard error
An unrecoverable error where a workstation is stopped.

heap
An area of free memory available for dynamic allocation by a program. The size of a heap varies, depending on the memory requirements of a program.

help engine
A small program that actually controls an on-line help system.

heterogenous file and print services

Network print sharing and file sharing support at the server for print and file requests from multiple client operating system environments. For example, print and file service support on a LAN Manager server for DOS, OS/2 and Apple MacIntosh clients.

X 191828
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hexadecimal
Pertaining to a numbering system with a base of 16; valid numbers use the digits 0 through 9 and characters A through F, where A represents 10 and F represents 15.

history file
A file providing a record of system installation.

hook
(1) In programming, an area of program code that makes connections with other program codes possible. (2) A mechanism by which procedures are called when certain events occur in the system, for example, the filtering of mouse and keyboard input before it is received by an application program.

host computer
(1) In a computer network, a computer providing services such as computation, database access, and network control functions. (2) The primary or controlling computer in a multiple computer installation.

host processor
A processor that controls all or part of a network.

hot reference bar
An area on the screen that the user can place his cursor over, press a key or mouse button, and have an action occur, such as Exit. The user neither types in the keyword, nor pulls down a menu.

hypertext
The imbedding of multiple branches in a program, based on the logical connections, or hyperlinks, between information. This allows a user to quickly find additional information on a subject, or related subjects, based on the current context.

I

IAYF
See Information At Your Fingertips.

IBM LAN Server
OS/2-based network operating system from IBM, which will support file and print services as well as other common LAN features.

IBM OS/2 Extended Edition (EE)
IBM's proprietary extension to OS/2. Included with the Extended Edition are the communications and database features to enable OS/2 EE workstations to work in conjunction with IBM minicomputers and mainframes.

icon

A pictorial representation of a choice for the user to select. Icons can represent items, such as a document or file, the user wants to work on and actions the user wants to perform.

icon area

The area at the bottom of the screen that is used to display the icons for minimized windows.

IDT

See information data type.

independent software vendor (ISV)

A participant in the computing industry marketplace whose primary focus is the development of software programs.

infinite loop

An error condition that occurs when a program encounters a problem causing it to execute a certain sequence of instructions repeatedly. The condition cannot be resolved or controlled by way of normal procedures. See also wait.

Interrupt Descriptor Table Register (IDTR)

An internal storage location in the 80286 and 80386 microprocessors that points to a table of memory addresses that the CPU will be vectored to when an interrupt or exception occurs.

inactive program

A program that has been started but is suspended so that it is no longer running.

index

A collection of data about the locations of records in a table, allowing faster access to a record using a specified key.

information data type (IDT)

An object type primarily intended for information representation and manipulation. IDTs will allow applications to borrow information manipulation capabilities from other applications, wholly transparent to the user. For example, an application will be able to provide computational and editing capabilities by using IDTs provided by future versions of Microsoft® Excel and Word. IDTs will also support functionality that facilitates the embedding and sharing of data by applications.

Information At Your Fingertips (IAYF)

Microsoft's vision for personal computing in the 1990s, Information At Your Fingertips exemplifies the concept of making computers more personal. IAYF embraces a wide range of new benefits for users and system administrators alike, with a focus on delivery of a far more natural, intuitive interface to information. IAYF is intrinsically an enterprise vision: it provides for a migration path to the true integration of computing resources across the organization with an attendant emphasis on the reduction of support, training and management costs through distributed, graphical computing. IAYF is also a very personal vision that anticipates the evolution of computers to indispensable devices for work, learning and recreation, making them something you reach for naturally when you need information. In sum, this view of computing is a challenge, not just for Microsoft but for the entire computer industry. Fulfilling this challenge means going beyond thinking about developing smaller and faster computers or about developing software applications that have more and better features. The driving vision for hardware and software technology must focus on making things easier for people while protecting the investments made in more than 55 million installed personal computers.

initialize

(1) To set counters, switches, addresses, or contents of storage to zero or other starting values at the beginning of, or at prescribed points in, the operation of a computer routine (2) To prepare an adapter for use by a program.

input

The information entered into a computer for processing or storage.

input device

A device such as a keyboard in a data processing system through which data may be entered into the system.

Integrated Services Digital Network (ISDN)

Transmission of voice and data over standard telephone wiring, being promoted as a solution to high-speed, low-cost wide area networking.

interactive graphics

Graphic objects that can be moved or manipulated by a user at a workstation.

interface

(1) A set of verbs used by a program to communicate with another program. (2) A shared boundary between two or more entities. An interface might be a hardware component to link two devices together or a portion of memory or registers accessed by two or more computer programs. (3) See user interface.

interpreter

(1) A program that translates and executes one statement at a time. An interpreter translates a statement every time it executes the statement. By comparison, a compiler translates all statements prior to executing any. BASIC is usually an interpreted language.

Interprocess Communication (IPC)

A set of capabilities built into OS/2 that allow for transfer and sharing of data between separate concurrently running processes or programs.

interrupt

Suspension of a process such as the execution of a computer program caused by an event external to that process, performed in such a way that the process can be resumed.

installable file system

A feature which allows an operation system to support multiple file systems. This permits multiple file systems, each optimized for a specific task, to be used simultaneously. For example, a server needs a file system which provides fast access to it's hard disk to support multiple users and also must support a floppy drive.

IPC

See Interprocess Communication.

ISDN

See Integrated Services Digital Network.

ISO

International Standards Organization.

ISV

Independent software vendor.

Information Technology Integration Services (ITIS)

Information Technology Integration Services, Microsoft's consulting arm. ITIS was founded in 1990 to help clients develop mission-critical business systems and to work with major systems integrators to provide specialized expertise in PC technologies in cooperative processing environments.

J

jack

A connecting device to which a wire or wires of a circuit can be attached and arranged for insertion of a plug. In layman's terms, a female electrical connector.

journal

A file used to record changes made in a system.

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K

Kanji
A character set consisting of symbols used in Japanese ideographic alphabets.

Kb
See kilobyte.

kernel
(1) The part of an operating system that performs basic functions such as allocating hardware resources. (2) The central part of other system software.

kerning
The design of graphics characters so that their character boxes overlap; used to proportionally space text.

key
One or more characters used to identify the record and establish the order of the record within an indexed file.

keyword
One of the predefined words of a computer or command language.

kilobyte (Kb)
1024 bytes.

L

label
(1) The name in the fixed disk or diskette directory that identifies a file. (2) In programming, the field of an instruction that assigns a symbolic name to the location at which the instruction begins.

LADDR
See Layered Device Driver.

LAN
See local area network.

LAN Manager
Microsoft's networking environment.

LAN Manager for UNIX
LAN Manager under UNIX. A portable version of LAN Manager, the reference port being LAN Manager for UNIX. Allows UNIX-based machines to function as servers to DOS-and OS/2-based LAN Manager workstations.

layer

In network architecture, a group of services, functions, and protocols that is one of a set of hierarchically arranged groups and that extends across all systems that conform to the network architecture.

Layered Device Driver (LADDR)

A specification for hardware vendors who want to write OS/2 device drivers for versions 1.21, 1.3 and 2.X. The LADDR device driver specification features a modular, layered architecture that supports SCSI devices. It was jointly developed by Microsoft and four partners in the adapter and personal computer markets.

LCD

Liquid crystal display.

LDTR

See Local Descriptor Table Register.

Library

A file that stores related modules of compiled code. The linker extracts modules from the library and combines them with other program object modules to create executable program files. See Dynamic-Link Library.

licensing services

A facility that controls and meters the usage of applications programs by network nodes. Licensing services are important to users of networks who are interested in sharing access to commonly-used applications programs for the purpose of saving money. Licensing services are an example category of distributed services that exploits the inherent benefits of networks. See also distributed system services.

LIM

Lotus-Intel-Microsoft. See expanded memory.

line speed

The rate at which data is transmitted from one point to another over a telecommunications line, expressed in bits per second (bps).

link

(1) The physical medium of transmission, the protocol, and associated devices and programming used to communicate between computers. (2) To interconnect items of data or portions of one or more computer programs; for example, the linking of object programs by a linkage editor, or the linking of data items by pointers.

link maintenance

Ability to move files around a network at will without breaking links between file segments that have been "cut-and-pasted" into documents and their source files. Link maintenance is an advanced capability of Microsoft's OLE (object linking and embedding) technology. See object linking and embedding.

LINK
A command that takes several programs and subprograms that were meant to be used together, but written separately, and combines them into one. The link step results in a complete program ready for execution.

linkage editor (linker)
A computer program for creating load modules from one or more object modules or load modules by resolving cross-references among the modules and, if necessary, adjusting addresses.

linker
The link step that results in a complete program ready for execution.

list
An action requested while in an entry field to search for valid choices for that entry field. The result is a panel from which the user can select a choice to be used in the entry field. See also prompt.

list box
In Presentation Manager and Windows, a vertical list of selectable choices contained within a dialog box.

load
(1) To move data or programs into memory. (2) To place a diskette into a diskette drive.

load time
(1) The time during which a program is being loaded into memory for execution. (2) In programming, the time it takes to enter data into memory or working registers.

load-time dynamic linking
A mechanism that enables program modules and their external references to dynamic-link libraries to be loaded into memory at program load time.

local area network (LAN)
(1) Two or more computing units connected for local resource sharing. (2) A network in which communications are limited to a moderate-size area such as a single office building, warehouse, or campus, and that do not extend across public rights-of-way. A LAN enables personal computers to have access to common data and peripherals. LANs typically consist of PCs with adapter cards, file servers, printers, and gateways to departmental or corporate computers, and network software to integrate these components. More sophisticated LAN's permit the sharing of computing resources, in addition to sharing of printers and file storage facilities. For example, networks equipped with Microsoft's LAN Manager support client-server computing, an architecture that facilitates the sharing of compute resources by partitioning the execution of applications between the client node and the server node. The availability of client-server computing facilities on LANs has stimuluted the development of various client-server applications, including relational database servers, communications gateway servers and group workflow management programs.

Local Descriptor Table Register (LDTR)
An internal storage location in the 80286 and 80386 microprocessors that points to a table that defines the virtual address space of a specific task.

location transparency

The ability of a networked system to shield its users from the need to know anything about the actual physical configuration of the network to access resources. Such a network provides a single name (or alias) for each network resource. To access, say, a specific disk volume or file, a user need only know its name. The requirement to remember the names of physical machines and path information is eliminated. Networks with location transparency offer the further benefit of permitting administrators to rearrange the physical configuration of the network without concern for disrupting users. For example, an administrator could move a user's home directory on a server to a new disk drive or different computer altogether, without need for informing the user of the change.

lock/locking

(1) The process by which a database ensures integrity of data. Locking prevents users from accessing inconsistent data. (2) The process of restricting access to resources in a multiuser environment.

logging on

The procedure that links a user to a multiuser system.

logical device

(1) An input/output device identified in a program by a label or number that corresponds to the actual label or number assigned to the device. Contrast with physical device. (2) In the OS/2 program, a redirected disk, file, printer, or other specific device.

logical link

The conceptual joining of two nodes for direct communication. Several logical links may be able to utilize the same physical hardware.

LU 6.2

Logical Unit 6.2 (also known as Advanced Program-to-Program Communications). A type of Logical Unit that supports peer-to-peer sessions between two applications in a distributed data processing environment using the SNA general or user-defined data stream.

M

MAC

See Medium Access Control.

Mailslots

A network communications mechanism which allows a workstation to broadcast a message to many computers on the network. Mailslots are one of several interprocess communications mechanisms (IPC) available under Windows-32 and OS/2.

MAKE

A program that keeps track of all modules that constitute a software program and, when changes are made to one or more modules, automatically rebuilds (recompiles and relinks) the modules and any that depend on them. MAKE is normally controlled by a text file (the MAKE file) that describes all dependencies.

Manufacturing Automation Protocol (MAP)

A draft specification promoted by General Motors and others that implements the full ISO seven-layer protocol stack for factory automation environments.

marker

A symbol that replaces the cursor in a panel area that is no longer interactive. It marks where the cursor will return when the panel area is made interactive again.

MASM

Microsoft Macro Assembler.

maximize

A window-sizing action that makes the window the largest size available.

MCA

See Micro Channel Architecture.

Medium Access Control (MAC)

A specification that defines the interface and services provided by the lower half of the Link Layer of the ISO reference model. Also commonly used to describe the interface between the link layer of the OSI model and the network adapter.

memory

(1) The storage on electronic chips. Examples of memory are random access memory (RAM), read-only memory (ROM), or registers. (2) The program-addressable storage from which instructions and other data can be loaded directly into registers for subsequent execution or processing.

memory allocation

An operating system function that assigns memory areas to tasks. Synonymous with storage allocation.

memory mapped files

An operating system feature which maps a file into a program's address space. Memory mapped files allow an application to read and modify a file's content as if the file were an in-memory data structure. Memory mapped files use the operating systems' s demand paging features to allow applications to access and manipulate files without worrying about how big they are. Without memory mapped files, every application that needs to work with large files must include code to handle moving the data between disk and main memory.

memory model
One of the models that specifies how memory is set up for program code and data. In general, programmers specify the smallest model possible for a given program in order to obtain the fastest program speed.

memory protection

Strict management of system memory to prevent the corruption of any application's program code or data by another, ill-behaved application. Memory protection ensures that concurrent applications cooperate and prevents them from interfering with system processes. OS/2 and Windows-32 provide this feature.

message
(1) The information not requested by users but presented to users by the computer in response to a user action or internal process. (2) In Presentation Manager, a packet of data used for communication between Presentation Manager and windowed applications. Similarly, in Windows, a packet of data used for communication between Program Manager and windowed applications.

Message Transfer Agent (MTA)
An X.400 term for a server that performs store/forward/transfer of an e-mail message in a wide area network.

metafile
In the context of graphical user interfaces, the generic name for the definition of the contents of a picture. Metafiles allow pictures to be used by other applications.

Micro Channel Architecture (MCA)
A 32-bit bus standard used in IBM®PS/2 products.

millions of instructions per second (MIPS)
A measurement of processing speed. MIPS refers to the average number of machine language instructions performed by a central processing unit in one second. A typical Intel 80386-based PC is a three to five MIPS machine, whereas an IBM System 370 mainframe typically delivers between fiveand 40 MIPS. MIPS measures raw CPU performance, but not overall system performance.

minimize
A window-sizing action that makes the window the smallest size allowed.

MIPS
See millions of instructions per second.

MIS
Management information systems.

mixed-language programming
The use of several programs or subprograms in one main program, where all programs are not written in the same language; for example, C and assembler, or BASIC and C. Allows the programmer to use the best language for the specific application of the subprogram.

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modem

A device that converts digital data from a computer to an analog signal that can be transmitted on a telecommunication line, and converts the received analog signal to digital data for the computer. Synonymous with modulator/demodulator.

modulator/demodulator

See modem.

mouse

A device used to move a pointer on the screen.

MS-DOS

The Microsoft Disk Operating System, the standard operating system for computers equipped with the Intel 8086 and 8088 (or equivalent) microprocessors or for 80286 and 80386 microprocessors running in 8086 mode.

MS-NET

Microsoft's DOS-based networking systems software product, officially known as Microsoft Network, announced in 1984 and shipped since 1985. Largely superceded by Microsoft LAN Manager.

MTA

See Message Transfer Agent.

multitasking

The concurrent execution of two or more distinct tasks by a computer.

multithreaded

The ability of an operating system to execute multiple tasks concurrently. Multithreading allows applications to be developed which perform multiple tasks at the same time. An example of such program is, a word processor which allows a user to print one document while simultaneously editing another.

multiuser

The ability of a computer to support many users operating at the same time, while providing to each user the full range of capabilities of the computer system.

N

NT

See New Technology.

named pipe

A high-level interprocess communications method (IPC). The processes can coexist on the same computer or can be running in a network environment on separate machines. Named pipes are often used in client-server applications where one process (the client) runs on the user workstation and the other process is a server application. In a client server application, the server process creates the named pipe which can then be accessed by the client.Peer-to-peer named pipes allows each machine to act as a server. With peer-to-peer named pipes, clients as well as servers can create a named pipe.

NCB

See Network Control Block.

nest

To incorporate a structure or structures of some kind into a structure of the same kind. For example, to nest one loop (the nested loop) within another loop (the nesting loop) or to nest one subroutine (the nested subroutine) within another subroutine (the nesting subroutine).

NetBIOS Extended User Interface (NetBEUI)

An extension of the NetBIOS interface that IBM developed for its Token Ring Networks. Typically used to describe the software developed by IBM that provides the interface between the Network operating system and the Session layer of the ISO model. As implemented by IBM, NetBEUI also is a transport protocol that implements layers 2–5 of the ISO model.

Netware

A local area network operating system produced by Novell®Inc. Several families of Netware products exist, including Novell's most recent release, Netware 386.

Netware Loadable Module (NLM)

A server application written for Novell's Netware 386 API set. Analogous to Value-Added Processes (VAPs) for prior versions of Netware.

network

A configuration of data processing devices and software connected for information interchange.

network administrator

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

network application

A network program, or combination of a program and data, that performs a task, typically involving two or more computers.

network-aware

A program that has been written to take advantage of resources available to it over the network or respond to requests for resources originating on the network. An example of a network-aware application is a client-server database which combines a client database front-end connected to a remote SQL Server database.

Network Control Block (NCB)
A data structure used to pass network I/O commands to Netbios drivers.

network redirector

See redirector.

New Technology (NT)

A new technology operating system kernel which incorporates advanced operating system features and will be used as the foundation of OS/2 3.0.

NLM

See Netware Loadable Module.

null
A special value that indicates the absence of information.

number selection
A fast-path selection method for a menu in which users type the number that designates the choice.

NumLock mode
A typing mode in which a dual-purpose numeric keypad on the keyboard is locked in the secondary-purpose mode, in which a number is inserted for each key depression.

O

object

An instance of an object class. An object normally consists of data and code. The code determines what operations the object can perform on itself.

object class

See class.

object code
The output from a compiler or assembler, which is executable machine code or suitable for processing to produce executable machine code.

object file
The machine-level program produced as the output of an assembly or compiled operation.

object linking and embedding (OLE)

Embedding is similar to copying and pasting data between applications, except that embedded information can be managed in place using the source application. Updating or changing the embedded information can occur in the context of the current application simply by clicking on the embedded application with a pointing device and making changes in place. There is no need to go out to the originating application to make modifications and then move the changes into the current application by repeating the traditional cut and paste process. Linking provides the added benefit of a live connection to the file from which the embedded information was taken. Any updates or changes to the source file are reflected in the embedded material automatically. The need to track changes in source files manually is eliminated. Further, the links are maintained no matter where the source files are moved on the system.

object module
See object file.

object-oriented programming (OOP)
A programming methodology in which every element in a system is self-contained, having within itself all the data and instructions that operate on that data that are appropriate for that object. In a traditional system, one system element operates on another; in object-oriented computing, one element sends a message to another and the recipient carries out the task for itself. The advantages are that objects are easy to maintain and reuse and that they match the design model for graphical applications.

OEM
Original equipment manufacturer.

OLE

See object linking and embedding.

On-Line Transaction Processing (OLTP)
The high end of transaction-oriented DBMS applications, commonly used in financial transfers, airline reservations, and automatic teller operations. OLTP is proven technology in the mainframe arena and is fast moving to the minicomputer and workgroup computing platforms.

Open Software Foundation (OSF)

A consortium of computing industry vendors organized to develop an open, UNIX-based operating system standard. OSF's first operating system release, called OSF/1, is built on IBM's UNIX-based AIX kernel and the Motif graphical user interface.

Open Systems Interconnect (OSI)
A publication of the International Standards Organization that defines seven independent layers of communication protocols. Each layer enhances the communication services of the layer just below it and shields the layer above it from the implementation details of the lower layer. In theory, this allows communication systems to be built from independently developed layers.

operating system

The master control program that governs the operation of a computer. An operating system may provide services such as resource allocation, scheduling, input/output control, and data management.

operating system wrappers

Object-oriented means of invoking operating system functions. Essentially, each operating system function as we know it in a traditional programming sense is wrapped in an object-oriented interface. For example, the window class and scroll bar class define window objects that contain the code necessary to perform operating system duties such as window display tasks and screen manipulation tasks.

optimize

To reduce the size of the executable file by eliminating unnecessary instructions.

option

(1) A specification in a statement or command that can be used to influence the execution of the statement. (2) A selectable item on a pull-down menu.

OS/2

The second-generation operating system codeveloped by Microsoft and IBM to exploit the power and speed of personal computers based on the Intel 80286, 80386 and later microprocessors. Key features of OS/2 include support of multitasking and programs larger than 640Kb, sophisticated memory management capabilities, preemption, a graphical user interface, and process-to-process communication facilities.

OS/2 file system

A file system provided by OS/2 and accessible through the OS/2 file I/O functions. A file system is restricted to a single medium, either an entire diskette or a single partition of one fixed disk.

OS/2 EE

See IBM Operating System/2 Extended Edition.

OSI

See Open Systems Interconnect.

output device

A device such as a printer or display in a data processing system.

overflow

A point reached when the memory capacity of a computer is filled with more data that the computer can store.

P

p-code
See pseudo-code.

pacing
In communications, a technique by which a receiving station controls the rate of data transmission by a sending station to prevent overrun.

packaged product

Software, together with documentation and other reference information, that has been shrink-wrapped and made available to the retail distribution channel as a specific part number. Packaged products may be purchased by the general public. Contrast with technologies and APIs, which normally are not released to the general public. APIs, for example, are not products *per se* but specifications. They may be defined for ISVs to use in developing software. These specifications and related development tools are typically made available to ISVs via software development kits.

page
In a virtual storage system, a fixed-length block that has a virtual address and is transferred as a unit between memory and disk storage.

paint
In Presentation Manager and Windows, the action of drawing or redrawing the contents of a window.

palette
A list of colors assigned to panel elements.

palette management

Palette management provide a mechanism to choose which colors to display. Graphical devices often support a limited number of simultaneous colors. These colors can be selected from a much larger palette of possible colors. For example, a VGA screen can display 16 colors out of an overall palette of 256.

panel
A particular arrangement of information grouped together for presentation to the user. Contras: with screen.

parameter
(1) The information supplied by a program or user to a command or function. (2) The data passed between programs or procedures.

parent process
A process that creates other processes. Contrast with child process.

parent window
A window relative to which one or more child windows are positioned. Contrast with child window.

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password
A unique string of characters that a program, computer operator, or user must supply to meet security requirements before gaining access to systems services or data.

paste
A function that copies the contents of the clipboard and inserts it at the current cursor position.

path
(1) The route used to locate files on a fixed disk or diskette, consisting of a drive and directories.
(2) The route between any two nodes on a network.

Paths
In an object-oriented programming environment, graphical objects often consist of multiple graphic primitives. Paths provide a means to group these primitives into a single object which can then be manipulated.

PC-NET
IBM's DOS-based networking systems software product, officially known as the IBM PC LAN Program. Developed by Microsoft and IBM, PC-NET was announced by IBM in 1984 and has been shipping since 1985.

peer-to-peer named pipes
See named pipes.

pel
See pixel.

physical device
An input/output device identified in a program by its actual label or number. See logical device.

picture element
See pixel.

pipe
To direct the data so that the output from one process becomes the input to another process.

pixel
The smallest area of a display screen capable of being addressed and switched between visible and invisible states. Synonymous with pel and picture element.

pointer
The symbol displayed on the screen that is moved by a pointing device such as a mouse.

pointing device
An instrument such as a mouse, trackball, or joystick used to move a pointer on the screen.

polyfillet
In graphics, a curve based on a sequence of lines. It is tangential to the end points of the first and last lines and also tangential to the midpoints of all other lines.

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polyline
In graphics, a sequence of adjoining or connected lines.

pop
To remove an item from a last-in, first-out list or stack.

pop-up window
A window that follows either a primary or secondary window in a dialog and is displayed on top.
Each pop-up window must be completed before returning to the underlying window.

POSIX

A set of software standards now be developed by the IEEE POSIX Working Group, intended to
allow applications to be written to a single target environment in which they can run unchanged on
a variety of systems. The POSIX specifications now define characteristics for operating system,
DBMS, data interchange, network services, user interface and programming interfaces. Several
vendors have announced plans to make their operating systems POSIX-compliant.

power-on self-test (POST)
A series of diagnostic tests that are run each time a device's power is turned on.

preempt
To take control away from, such as to interrupt the execution of a process to allow another process
to execute.

preemption
An operating system feature that allocates processor time in discrete slices to multiple processors
or threads. Preemptive systems simplify development by removing the need for a programmer to
anticipate the need to manually yield control to another process. Preemptive systems are more
robust because they eliminate the possibility of a single process using all of the CPU time.

presentation space
The space that contains the device-independent definition of a picture.

primary key
A column whose values uniquely identify the row.

primary window
The window in which the main dialog between the user and the program takes place.

print queue
A file containing a list of the names of files waiting to be printed.

print server
A network node, usually consisting of fixed-disk storage and a CPU, that controls one or more
printers that can be accessed on a shared basis by users on a network.

print service

Network execution of print jobs, typically provided to network nodes by a print server. Print servers are popular among users of local area networks, because they allow the sharing of expensive output devices among many nodes. Simple print services do not represent an example of distributed system services--or truly effective use of the network--because the server acts merely as a traffic cop for print jobs and does not contribute any intelligence to a given transaction. See also file service.

print spooler
A program that allows output to be temporarily stored until it can be printed.

priority
A rank assigned to a task that determines its precedence in receiving system resources.

Professional Office System (PROFS)
IBM's mainframe-based office automation software. It allows users to receive, create, send, store, and search for information within an office environment.

program group
In Presentation Manager and Windows, a set of several programs whose icons can be acted on as a single entity. For example, the icons can be associated with a single group icon. Clicking on the program group icon causes the icons for each of the programs in the group to be displayed simultaneously.

program name
The full file specification of a program. Contrast with program title.

program title
The name of a program as it is listed in the Start Program window. Contrast with program name.

prompt
(1) An action that users request while the cursor is in an entry field. (2) A displayed message that requests input from the user or gives operational information.

protected mode
A mode in memory addressing where virtual addresses are mapped to physical addresses.

protected-mode application
An application program that runs in an OS/2 screen group. Protected-mode applications cannot directly access memory locations, perform low-level I/O operations, or directly access hardware devices. Contrast with real-mode application.

protocol
The set of rules governing the operation of functional units of a communication system that must be followed if communication is to take place.

protocol handler
The programming in an adapter that encodes and decodes the protocol used to send data over a network.

provider interface

Microsoft's Windows API will evolve to provide APIs for centralized administrative support of the client workstation over the network. Providers of network services will use this interface. This provider interface will be fully open to the development community.

pseudo-code (p-code)

A terse, condensed code emitted by some compilers to enable the development of very large programs on systems with limited memory and other computing resources. Because P-code is an interpreted language, it executes more slowly than the normal executable object code produced by most compilers.

pull-down
An extension of the action bar that displays a list of choices that are available for a selected action bar choice.

push
To add an item to a first-in, first-out list or stack.

pushbutton
A rounded-corner rectangle with text inside, used in graphics applications for actions that occur when the pushbutton is selected.

Q
QBE
See Query-By-Example.

query
(1) A specific request for data or instructions. (2) A request for information from the database on specific conditions; for example, a request for a list of all customers in a customer table whose balance is greater than $1,000.

Query-By-Example (QBE)
A program product developed by IBM to work in conjunction with IBM's mainframe relational DBMS, DB2. QBE is used to write queries graphically.

queue
A line or list formed by items waiting to be processed; for example, a list of print jobs waiting to be printed.

R

radio button
A round button on the screen that is used to indicate items in a list from which only one item can be selected. Contrast with check box.

RAM
See random access memory.

RAM semaphore
A semaphore used to serialize different threads of a single process. See semaphore. Contrast with system semaphore.

random access
An access mode in which records can be read from, written to, or removed from a file in any order.

random access memory (RAM)
A memory device into which data is entered and from which data is retrieved in a nonsequential manner.

read-only memory (ROM)
A computer's memory area whose contents cannot be modified.

real-mode application
On an OS/2 PC, an application program that is not running in an OS/2 screen group (programs in an OS/2 screen group are running in protect mode). On a PC equipped with Windows 3.0 or later Windows versions, an application program that is not running in Windows Standard mode or Windows Enhanced mode. A real-mode application can perform low-level I/O operations, directly access memory locations and control hardware devices. Contrast with protected-mode application.

record and field locking
The ability of a database to automatically lock users out of a specific record or field to maintain security or prevent concurrent access problems.

record
A group of related fields of information treated as a unit. The logical equivalent of a row.

record format
The definition of how data is structured in the records contained in a file. The definition includes record names, field names, and field descriptions, such as length and data type . The act of resetting a system or data stored in a system to an operable state following damage.

redirector
The code that resides on a network client that redirects input and output functions from local I/O devices to the network.

redirection
The reassignment of the standard input and standard output devices.

reentrant
The attribute of a program or routine that allows the same copy of the program or routine to be used concurrently by two or more tasks.

referential integrity
The rules governing data consistency; for example, the relationships among the primary keys and foreign keys of different tables.

refresh
To update a window or panel with new information or display.

register
A storage device, having a specified storage capacity such as a bit, a byte, or a computer word, and usually intended for a special purpose.

relational database
(1) A database that is organized and accessed according to relationships between data items. (2) A data structure perceived by its users as a collection of tables. A relational database consists of tables, rows, and columns. Most minicomputers and mainframes today have relational database systems available for business use. Typical examples are DB2 from IBM and RDB from Digital Equipment Corp. Relational databases differ from nonrelational databases in that there are no system dependencies stored within the data; for example, hierarchical databases are not relational because they contain pointers to other data.

remote
Referring to a system, program, or device that is accessed through a telecommunication line.

Remote Procedure Call (RPC)
A form of IPC that lets a process call a procedure located in another process, which can be local or remote.

remove
The command used on a LAN to disconnect an adapter from a network.

report generator
A software component that supports the production of formatted output from a database.

reset
To return a device or process to a clear or initial state.

resource
(1) Any facility of a computing system or operating system required by a job or task, including memory, input/output devices, processing unit, data files, and control or processing programs. (2) A network component, such as a file, printer or serial device, shared by other components of the network. (3) In Presentation Manager, the means of providing extra information used in the definition of a window. A resource can contain definitions of fonts, templates, accelerators and mnemonics; the definitions are held in a resource file.

restore
(1) To return a window to its original size or position following a sizing or moving action. (2) An OS/2 command that restores files that have been backed up.

Rich Text Format (RTF)
A format developed by Microsoft, applicable for word processing and desktop publishing. Like DCA files, RTF files are used to exchange formatted text between word processors or other text-handling applications. RTF, however, maintains far more formatting information. A DCA file, for example, cannot contain point-size information. RTF works by using control words, strings of characters such as \margl for left margin and \plain for plain text. RTF can also encode color and graphics and is designed to support high-resolution printers. (The measuring system in RTF is a twip; one twip equals 1/20 of a point, or 1/440 of an inch.) RTF is a standard Windows clipboard format; applications that support RTF can exchange formatted text.

ring
A network configuration where a series of attaching devices are connected by unidirectional transmission links to form a closed path.

ring topology
In communications, a logically circular, unidirectional transmission path without defined ends. Control can be distributed or centralized.

rollback
The ability to remove uncompleted transactions after a system failure.

rollforward
The ability to recover from major disasters such as media failure and head crashes by reading the transaction log and reexecuting all readable and complete transactions.

ROM
See read-only memory.

round-robin scheduling
The process of executing programs in a sequence, with each program allocated a specific amount of time.

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

routing
In communications, the assignment of the path by which data will reach its destination.

row
A group of related fields of information treated as a unit. The logical equivalent of a record.

RPC
See Remote Procedure Call.

RTF
See Rich Text Format.

run
To cause a program, object, utility, or other machine function to be performed.

run time
(1) The elapsed time taken for the execution of a computer program. (2) The time during which a program is active.

run-time dynamic linking
A mechanism for delaying the binding of external references in a program module beyond load time.

S
SAA
See Systems Application Architecture.

scalability

The ability of a computing element (such as a process, processor or structure) to grow seamlessly.

screen
The physical surface of a display device upon which information is presented to the user. Contrast with panel.

screen driver

The device driver that controls the output of information to a physical display device used by a system. See also device driver.

screen group
An OS/2 or DOS session. The OS/2 operating system allows multiple applications to run concurrently, where each application can access the display screen.

scroll bar
A panel element associated with a scrollable panel area, used in graphics mode only, and indicating the direction of additional panel information not visible in the panel.

scrolling
To move a display image vertically or horizontally in such a manner that new data is displayed at one edge and data is removed from view at the opposite edge.

SDK
Software Development Kit.

secure file system

A file system designed to be secure from intrusion or use by unauthorized users.

select
To mark or choose an item in a panel.

selection cursor
A type of cursor used to select choices. It is represented by highlighting the choice it is currently positioned on.

semaphore
A signal mechanism used to control access to system resources. See RAM semaphore, system semaphore.

send
To send a message or file to another computer. Contrast with receive.

sequential access
An access method in which records are read from, written to, or removed from a file based on the physical order of the records.

sequential file
A file whose records are arranged in the order in which they are placed in the file.

serial device
A resource (such as a modem or plotter) attached to an LPT or COM port for direct I/O use. Some printers are designated serial as well.

server
On a LAN, a node that provides facilities to other nodes. With LAN Manager, an OS/2 node may share resources with other nodes without additional software, by invoking the peer server feature. Contrast with workstation.

server application

A process or program that runs on a server, typically as a network resource. An example of a server application is a calendaring program that provides a means for network users to exchange scheduling information and calculate optimal meeting times. Another example: a communications program that organizes and allocates network communications resources. Benefits of some server applications include network access to more powerful computing resources, effective sharing of data and other resources, and exploiting the inherent benefits of the network. More sophisticated server programs known as client-server applications execute interactively with an application resident on network nodes. See also client-server and distributed computing.

Server Message Block (SMB)

A set of protocols that allow the file and device input/output APIs of OS/2 to be redirected to remote devices over a local area network.

shared memory

An OS/2 feature that allows system memory to be shared among processes.

shared resource

A printer, file, or serial computer communications device made available to multiple computers not physically attached to the resource, via the LAN.

shear

The action of tilting graphics text so that each character leans to the left or right while retaining a horizontal baseline.

SMB

See Server Message Block.

SNA

See Systems Network Architecture.

soft error

On a network, an intermittent error that causes data to be transmitted more than once before it is received accurately. More generally, any application processing error which is successfully intercepted by the operating system, thereby preventing it from interfering with or terminating other processes running on the system. Compare to hard error.

sort

To arrange a set of items according to keys used as a basis for determining the sequence of the items; for example, to arrange the records of a personnel file in alphabetical sequence by using the employee names as sort keys.

source code

A set of instructions, written in a programming language, that must be translated to machine instructions before the program can be run. Contrast with object code.

source program

See source code.

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source-level debugger
A debugger that displays information and results in the context of the source language in which a program is written; older debuggers display the resulting machine instructions or assembly code, making it difficult for a programmer to interpret what is happening in the code.

Spool Queue Manager
In Presentation Manager, the part of the Spooler that manipulates print jobs.

Spooler
A program that intercepts the data going to a device driver, and writes it to disk. The data is later printed or plotted when the required device is available. A Spooler prevents output from different sources from being intermixed.

SQL
See Structured Query Language.

SQL statement
A statement written in the Structured Query Language (SQL). See Structured Query Language.

stack
An area in memory that stores temporary register information, parameters, and return addresses of subroutines. See first-in, first-out.

stack pointer
A register that contains the current location of the top of a stack.

standalone
Pertaining to operations that are independent of another device, program, or system.

starvation
In an operating system, a situation in which a process cannot complete its designated task because it is kept waiting too long for processing time or for a system resource.

static recovery
Routines and/or programs that correct errors in data managed by a DBMS caused by hardware or software failures. Static recovery normally occurs on system restart of DBMS. Contrast with dynamic recovery.

station
(1) A workstation. (2) An input or output point in a system that uses telecommunications facilities.

storage allocation
See memory allocation.

storage
A media used to save information, such as a fixed disk. Contrast with *memory*.

stored procedure
A multistatement, compiled SQL query with control-of-flow language that can take parameters and allow user-declared variables, conditional execution, and other powerful programming features.

string
A sequence of elements of the same nature, such as characters considered as a whole.

structured programming
A method of writing programs using common program blocks and loops that are easy to read and understand, as opposed to programming that does not have an organized flow and becomes difficult to read and change ("spaghetti code"). Structured programming can be done in any computer language, but languages with structured control statements impose a structured discipline on programmers.

Structured Query Language (SQL)
Commonly pronounced "sequel," an acronym for Structured Query Language, a database query and programming sublanguage originally developed for IBM mainframe computers. SQL is an established set of statements used to add, delete, or update information in a table or request information from one or more tables in the form of a report. There is now an ANSI-standard SQL definition for all computer systems.

subdirectory
A directory contained within another directory in a file system hierarchy.

subroutine
A sequence of statements that can be used in one or more computer programs and at one or more points in a computer program.

swapping
A process that moves segments between memory and storage.

switch
An action that moves the input focus from one area to another. This can be within the same window or from one window to another.

Symbolic Link (SYLK)
Developed by Microsoft, applicable for spreadsheet analysis and database management. Like DIF files, SYLK files are intended primarily for exchanging row- and column-oriented data, such as spreadsheets and databases. Unlike DIF files, however, SYLK files provide some data compression and can also represent some formatting information, such as alignment, commas, and column widths.

synchronization
Within the context of multimedia systems, the ability to coordinate the output of various types of information. On a multimedia computer, the ability to produce stored voice, music, video and text information in precise time relationships is a necessity for numerous applications.

synchronous
Referring to two or more processes that depend upon the occurrences of specific events such as a common timing signal. Contrast with asynchronous.

synchronous transmission
In data communication, a method of transmission in which the sending and receiving of characters is controlled by timing signals.

system administrator
Person responsible for planning computer or network installation and ensuring the successful installation and use of the product by other users.

System Editor
An ASCII text editor provided as part of the OS/2 program.

system macro language
A macro language common to the operating system and all frequently-used applications. See common macro language.

system menu
The pull-down menu in the top left-hand corner of all primary windows, which allows them to be moved and sized. It can also be used to close a program and to select Task Manager.

system queue
In Presentation Manager and Windows, the master queue for all pointing device and keyboard events, and various other system messages.

system semaphore
A signal mechanism providing control between threads of multiple processes and able to be used by processes that do not share memory. See semaphore. Contrast with RAM semaphore.

system trace
A historical record of specific events in the executing of the operating system. The record is usually produced for debugging purposes.

system trace utility
In the OS/2 program, a diagnostic tool used to capture a sequence of system events, function calls, or data for analysis.

Systems Application Architecture (SAA)
A collection of selected software interfaces, conventions, and communication protocols designed to provide enhanced consistency and a common applications development environment across the IBM System 370, System 390, System 3X, AS/400 and Personal Computer product lines.

Systems Network Architecture (SNA)
IBM's strategic architecture for its networking products. The description of the logical structure, formats, protocols, and operational sequences for transmitting information units through, and controlling the configuration and operation of, networks.

T

tab
A typing action that moves the selection cursor to the next entry field or selection field.

table
A collection of rows (or records) that have associated columns (or fields). It is the logical equivalent of a database file.

Tagged-Image File Format (TIFF)
Developed by Aldus® Corp., with assistance from leading scanner manufacturers, primarily Hewlett-Packard®. Responsibility for maintaining the standard was turned over to Microsoft in 1987.Applicable for desktop publishing, image scanning, and processing, TIFF files are used primarily to store graphics created by image scanners. TIFF files contain tags that describe an image's height and width, resolution, gray scale or color, and the type of data compression scheme used. TIFF also allows high-resolution graphics to be stored more efficiently by using run-length compression. Run-length compression substitutes groups of identical (all white or all black) pixels with a code that uses less disk space. You use a method similar to run-length compression when describing how many eggs are in a carton. Instead of saying "egg" twelve times, you say "a dozen eggs." TIFF files use a slightly modified run-length compression standard with the name CCITT Group 3. TIFF is not tied to a brand of machine or type of microprocessor and is designed to handle many different images, from line art to halftones to color, in a variety of resolutions.

task
A set of one or more sequences of instructions treated by a control program as an element of work to be accomplished.

Task Manager
In the OS/2 program, the function that controls the starting and stopping of programs and which program has the input focus. It also allows the user to shut down the system.

TCP/IP
See Transport Control Protocol/Internet Protocol.

Technical Office Protocol (TOP)
A draft specification for the office environment promoted by Boeing that implements the OSI model.

telecommunication line
Any physical medium, such as a wire or microwave beam, that is used to transmit data.

terminal
In data communication, a device, usually equipped with a keyboard and display, capable of sending and receiving information.

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text
A set of characters or symbols.

thrashing
A condition in which the system can do little useful work because of system overloads such as swapping and starting and stopping communication links.

thread
The smallest unit of execution within a process. An OS/2 thread is a path of execution. Each OS/2 process can consist of multiple threads, which OS/2 treates as individual items to be scheduled. OS/2 can thus concurrently execute multiple portions of the same programs..

TIFF
See Tagged-Image File Format.

time-critical process
A process or program that must be active within specific intervals in order not to lose data or other input.

timeout
A time interval allotted for certain operations to occur.

time slice
A designated interval of time allocated for processing a thread.

title bar
The area at the top of the window that contains the window title.

token
(1) In a local area network, the symbol of authority passed among data stations to indicate the station temporarily in control of the transmission medium. (2) A character string in a specific format that has some defined significance in a Structured Query Language (SQL) or similar program.

TOP
See Technical Office Protocol.

TP4
One of the five classes of transport services proposed by the International Standards Organization. TP4 provides the most comprehensive set of services. TP4 implements the data transfer function defined by Layer Four (the transport layer) of ISO's seven-layer Open System Interconnect (OSI) model).

transaction, transaction processing
A group of database operations combined together into a logical unit of work that is either completely executed or completely aborted. Transaction processing is the method by which data integrity and high performance are achieved in most business computing environments.

transfer file
To send a file from one computer to another.

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transforms

A transformation of a graphical object. Examples include rotating an object or changing it's size.

transmit
To send information from one place for reception elsewhere.

transparent application integration

The ability to manipulate information with a variety of applications within a single document, without need to move from one application to another in order to produce the desired results. For example, a user could pull information from a spreadsheet, a charting program, and a database into a word processor by using point-and-click actions and simple commands, and then modify the different information types as needed from within the word processor before printing the completed document.

transport

(1) A protocol defining the terms of communication between two computing systems on a network.
(2) A communications protocol implementing the data transport services specified by layer four (the transport layer) of the ISO model.

Transmission Control Protocol/Internet Protocol (TCP/IP)
A set of network protocols that has become a de facto industry standard in engineering, government, and educational local area network environments. The TCP/IP protocol family includes transport, file transfer, terminal emulator, messaging and network management definitions.

transpose
To reverse the order.

Tree
The window in the OS/2 file system program that shows the organization of drives and directories.

trigger
A special kind of stored procedure that executes upon a deletion, update, or insertion to instruct the server to take action. Triggers are often used to enforce referential integrity.

truncation
The process of discarding part of a result from an operation when it exceeds memory or storage capacity.

U

UNC
See Uniform Naming Convention.

Underwriters Laboratories
An organization that examines, tests, and determines the suitability of materials and equipment to be used according to all National Electric Safety Code and National Electric Code regulations.

unformatted diskette
A diskette that contains no data and no track or sector format information. Contrast with formatted diskette.

Unicode
A single character set that is large enough to provide discrete characters for every major language in the world, including Far Eastern languages. Each character in Unicode is stored as a 16-bit value. Unicode is a superset of ANSI (the current Windows 3.0 character set) and is a developing standard that will dramatically simplify software development worldwide.

Uniform Naming Convention (UNC)
An extension to the OS/2 path-naming convention that allows a program to access any resource on the network via standard OS/2 APIs.

unlock
To release an object or system resource that was previously locked and return it to general availability.

upload
To move data or programs from a workstation to a host.

user
A person who uses the system to perform nonadministrative tasks.

user access list
A list that defines individual users and their access authorities.

user context
A user session created by an operating system in response to a logon request. User contexts are typically characterized by strictly-defined privilege sets defining the user's authority to access system resources and information. Contexts are intended to restrict unauthorized access to facilities and data, and to protect the system itself from ill-behaved applications and user interference, accidental or otherwise. Contexts are a feature of most multi-user operating systems, where normally they are tightly integrated with the security system.

user ID
A unique name that identifies a user to the network.

user interface
The hardware and/or software that allows a user to interact with and perform operations on a system, program, or device.

user profile
An OS/2 file containing commands that set environment values and run programs automatically when a user logs on.

utility classes

A category of object classes, each of which defines objects that perform useful "helper" functions. An example of a utility class: the string class, which defines string objects and the functions they can perform on string data. These functions might include "shift to upper case," "replace with italic," etc.

V

value

(1) A specific occurrence of an attribute; for example, "blue" for the attribute "color." (2) A quantity assigned to a constant, variable, parameter, or symbol.

VAR

Value-added reseller.

variable

A quantity that can assume any of a given set of values.

variable-length string

A character or graphic string whose length is not fixed but is variable within set limits.

vector symbol

In graphics, a set of symbols originally created as a series of lines and curves.

verification

The art of determining whether an operation has been accomplished correctly.

VGA

Video graphics array.

video input/output (VIO)

An API used to write data directly to the screen. Also refers to the VIO subsystem of OS/2.

visual programming

The use of graphical development tools and visual metaphors to create software. See AFX Composer.

W

wait

A condition characterized by the suspension of normal program or keyboard functions. See infinite loop.

WAN
See wide-area network.

warning message
The information provided by the computer to the users to alert him/her to a possible error condition in the system. Warning messages are also sent to warn the user that the action he/she is attempting can cause an undesirable condition or consequence.

watchpoint
An expression (such as x=3) that stops program execution when it becomes true. A common use of watchpoints is to determine where a variable may have been accidentally changed because of faulty program logic.

wide-area network (WAN)
A network that provides data communication capability in areas larger than those serviced by a local area network. WANs typically rely on serial line protocols to interconnect subnetworks.

wildcard character
The global characters that allow substitution in strings, often the asterisk character, as in command "dir *.doc," meaning "list all files in the directory with a .doc extension."

window
An area of the screen with visible boundaries through which a panel or portion of a panel is displayed.

window border
A visual indication of the boundaries of a window.

window class
The grouping of windows whose processing needs conform to the services provided by one window procedure.

window coordinates
The means by which a window position or size is defined; measured in device units, or pixels.

Windows Libraries for OS/2 (WLO)
Dynamic link libraries enabling Windows applications to operate on OS/2 versions 1.21, 1.3 and 2.0 as well as on DOS/Windows. WLO assures that a single Windows application binary will run on all of these systems without modification.

Windows-32 (Win32)
An extension of the Windows 3.0 API providing support for 32-bit Windows applications. Windows-32 supports significant new features and simplifies application development. The new API will be offered in identical form on both DOS and OS/2, providing a single, seamless graphical environment on Microsoft's two key operating system kernels.

window style
The set of properties that influence how events related to a particular window are processed.

window title
A title that identifies the window and associates it with an application.

Windows networking

Microsoft Windows will evolve to enable it to act as the network user's sole user interface. The Windows metaphor will be extended to transparently embrace basic network services (such as print queues and communications) while hiding the identity and complexity of the specific networking system in use. Meanwhile, the Windows API will include a single, open programming interface to fundamental network services that will enable developers of client programs to write network-aware applications without knowlege of the actual networking environment in place. Windows networking will also provide APIs for centralized administrative support of the client workstation, and for the providers of network services to use. This provider interface will also be fully open to the development community. The Windows programming interface will thus include file, print and communications APIs; interprocess communications APIs; mail APIs; security and authentication APIs; etc. Microsoft is fully committed to existing network standards such as X.400, and Windows networking will conform to new standards as they emerge.

Windows-16
The API provided by Windows 3.0. Windows-16 provides support for 16-bit Windows applications.

WLO

See Windows Libraries for OS/2.

work area
(1) An area in which terminal devices, such as displays, keyboards, and printers, are located. (2) An area reserved for temporary storage of data.

worksheet formats (WSF)
An OS/2 file format used to import and export data in worksheet formats supported by Lotus spreadsheet products.

working directory
The directory in which an application program is found. The working directory becomes the current directory when the application is started, unless, as is possible with OS/2, a separate current directory is specified.

workstation
A terminal or personal computer, usually connected to a mainframe or to a network, at which a user can run applications. A workstation generally cannot share its resources with other network nodes or a host computer. However, on a LAN Manager network, an OS/2 workstation may share resources over the LAN by invoking the peer server option. See server.

wrap
A condition that occurs when a file or buffer is full and new data overlays existing data.

write protection
The restriction of writing into a file or memory area by a user or program not authorized to do so.

WYSIWYG

"What You See is What You Get."

X

X.25

A standard network communications protocol (defined by the CCITT) that implements the internetwork communications function specified by the third (network) layer of the OSI network communications model. Microsoft's LAN Manager is supported by X.25 communications packages provided by various third-party vendors. X.25 is a packet-switched protocol often used in wide-area network configurations.

Z