

Glossary

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

- A -

Activate

Also Activation. A programming process that loads an object into memory, putting the object into an executable or running state. Also, the process of binding an object so as to put the object into its running state.

Active Client

The Active Client is the client-side element of the Active Platform that enables cross-platform content and applications. It includes support for HTML, scripting (VBScript and JScript), Java applets, ActiveX Components, ActiveX Controls, and Active Documents.

Active Document

A Windows-based, non-HTML application embedded in a browser, providing a way for the functionality of these applications to be accessible from within the browser interface.

Active Group, The

A standards organization, under the auspices of The Open Group, an open, customer-driven steering committee responsible for the ongoing development and management of ActiveX technologies and licensing.

Active Platform

An integrated, comprehensive set of client – Active Client

– and server

– Active Server

– component-based development technologies that make it easy for developers to integrate the connectivity of the Internet with the power of the personal computer.

Active Server

The Active Server is the server-side element of the Active Platform, specifically, a collection of server-side technologies that are delivered with Windows NT, and provide a consistent server-side component and scripting model and an integrated set of system services for component application management, database access, transactions, and messaging.

Active Server Page

The server-side execution environment in Microsoft Internet Information Server 3.0 that executes ActiveX Scripts and ActiveX Components on a server.

ActiveX

A set of language-independent interoperability technologies that enable software components written in different languages to work together in networked environments. The core technology elements of ActiveX are COM and DCOM.

ActiveX Automation

A language-neutral way to manipulate an ActiveX Component's methods from outside an application. ActiveX Automation is typically used to create components that expose methods to programming tools and macro languages.

ActiveX Control

A compiled software component based on the component object model (COM) that encapsulates a set of business or user interface functions. An ActiveX Control is used to provide user interface components and is designed to run on the client computer.

ActiveX Component

A compiled software component based on the component object model (COM) that encapsulates a set of business functionality. The functionality in an ActiveX component is accessed through ActiveX Automation interfaces. The ActiveX Component can execute either on a client computer or on a server computer, transparent to the calling application, through DCOM.

ActiveX Server Component

An ActiveX Component designed to run on the server-side of a client/server application. See [ActiveX Component](#).

ActiveX Scripting

The act of using a scripting language to drive ActiveX Components.

ADO

ActiveX Data Objects. A set of object-based data access interfaces optimized for Internet-based, data-centric applications.

Aggregation

A programming composition technique for implementing component objects. Using this technique, developers can build a new object using one or more existing objects that support some or all of the new object's required interfaces.

Anonymous FTP

Anonymous File Transfer Protocol. Used in the process of connecting to a remote computer as an anonymous or guest user in order to transfer public files to your local computer.

ANSI

American National Standards Institute. ANSI serves as a quasi-national standards organization. It provides area charters for groups that establish standards in specific fields, such as the Institute of Electrical and Electronics Engineers (IEEE). Also, commonly used to refer to a low-level table of codes used by a computer.

Apartment Model Multi-threading

The Component Object Model (COM) supports a form of multi-threading in Windows 95 and Windows NT called the *apartment model*. Apartment is essentially a way of describing a thread with a message queue that supports COM objects.

API

Application Programming Interface. A set of routines that an application program uses to request and carry out lower-level services performed by a computer's operating system.

Applet

An HTML-based program built with Java that a browser temporarily downloads to a user's hard disk, from which location it runs when the Web page is open.

Asynchronous Call

A function that enables processing to continue without waiting for the function to return a value.

ATM

Asynchronous Transfer Mode. A communications protocol defined for high-speed data communications.

Automation

See [ActiveX Automation](#).

- B -**Bandwidth**

The capacity of the transmission medium stated in bits per second (bps) or as a frequency (Hz). Generally, a higher bandwidth number indicates faster data-transfer capability.

Bind

Also Binding. To put an object into its running state, allowing the operations it supports to be invoked. Objects can be bound at run time—called *late binding* or *dynamic binding*

- or at compile time
- called *static binding*.

Browser

A program that interprets hypertext markup language (HTML) and displays information on a computer screen.

Bytecode

The executable form of Java code that executes within the Java Virtual Machine. Also called interpreted code, pseudocode, or p-code.

- C -**Cache**

Usually a temporary local store for information, a special memory subsystem where frequently used data values

are copied and stored for quick access.

Call

To transfer program execution to some other section of code, usually a subroutine, while saving the necessary information to allow execution to resume at the calling point when the called section has completed execution.

CASE

Computer Aided Software Engineering. Software that aids in application development including analysis, design, and code generation. CASE tools provide automated methods for designing and documenting traditional-structure programming techniques.

Certificate Authority

Certificate Authorities are companies that distribute certificates to software developers. To guarantee a control's authenticity, a Certificate Authority, such as the Verisign Corporation, develops a digital certificate for each developer who uses Authenticode technologies from Microsoft.

CGI

Common Gateway Interface. A server-side interface for initiating software services. A set of interfaces that describe how a Web server communicates with software on the same computer.

Class

A generalized category in object-oriented programming that describes a group of more specific items called objects. A class provides a template for defining the behavior of a particular type of object.

Class Identifier

Also CLASSID or CLSID. A unique identification tag (UUID) associated with a class object. A class object that is intended to create more than one object registers its CLSID in a task table in the system registration database to enable clients to locate and load the executable code associated with the object(s).

Class Library

A collection of one or more classes that programmers use to implement functionality.

Class Object

A member object within a class.

Client

A program that facilitates a connection to server computers and manages and presents information retrieved from those sources. In a client/server environment, the workstation is usually the client computer. In referring to COM objects, an object that requests services from another object.

Client/Server

A model of computing whereby client applications running on a desktop or personal computer access information on remote servers or host computers.

COM

Component Object Model. The object-oriented programming model that defines how objects interact within a single application or between applications.

Communications Protocol

A set of rules or standards designed to enable computers to connect with one another and to exchange information with as few errors as possible.

Component

See [ActiveX Component](#).

Compound Document

A document that contains data in different formats created by different applications.

Container Application

A container application provides storage for the embedded object, a site for display, access to the display site, and an advisory sink for receiving notification of changes in the object.

Control

In a graphical user interface, an object on the screen that can be manipulated by a user to perform an action.

Cookies

A means by which, under the HTTP protocol, a server or a script can maintain state or *status* information on the

client workstation.

CORBA

Common Object Request Broker Architecture. An Object Management Group specification for the interface definition between OMG-compliant objects.

Cursor Engine

A mechanism for managing data retrieved from a database, or a full transaction manager that optimizes the retrieval and update of server-based data.

- D -

DAO

Data Access Objects. DAO includes the full functionality of the Microsoft Jet database engine for local data management.

Data Dictionary

A repository of information about data, such as its meaning, relationships to other data, origin, usage, and format.

DCE

Distributed Computing Environment. An open set of services controlled by the OSF and designed to support performing distributed computing across heterogeneous platforms.

DCOM

Distributed Component Object Model. Additions to the Component Object Model (COM) that facilitate the transparent distribution of objects over networks and over the Internet.

Debugger

A development environment that supports step-by-step execution of application code and viewing the content of code variables.

Design-time ActiveX Controls

Visual authoring components that help a developer construct dynamic Web applications by automatically generating standard HTML and/or scripting code. They are analogous to wizards.

Distributed Processing

The physical or logical distribution of software components, processing, data, and management of application software.

DNS

Domain Name Service. A protocol that provides an Internet-wide database of host and domain names. For example, DNS is used to find the IP address of a host name written as *microsoft.com*.

Domain Name

An entry in an Internet address, such as *microsoft.com* in the fictitious U.S. address *www.example.microsoft.com/*.

- E -

E-commerce

Electronic Commerce. The process of buying and selling over the Web—often based on software products such as the Microsoft Merchant Server.

Event

Any action, often generated by a user or an ActiveX Control, to which a program might respond.

- F -

FAQ

Frequently Asked Questions. Usually a document containing questions and answers that address the basics.

Firewall

A security mechanism—such as the Microsoft Proxy Server

—that provides Internet access from desktops inside an organization, while at the same time preventing access to the

corporate LAN by outside Internet users.

FTP

File Transfer Protocol. The Internet standard high-speed protocol for downloading or transferring files from one computer to another.

Function

A general term used for a subroutine. In some programming languages, a subroutine or statement that returns values.

- G -

GIF

Graphics Interchange Format. A computer graphics file format developed in the mid-1980s by CompuServe for use in photo-quality graphic image display on computer screens.

Gopher

An early Internet protocol and software program designed to search for, retrieve, and display documents from remote computers or sites.

GUI

Graphical User Interface. A user interface that displays graphics and characters and provides an event model for users to control the operating environment.

GUID

Globally Unique Identifier. Identifiers (IDs) assigned to COM objects that are generated through a sophisticated algorithm. The algorithm guarantees that all COM objects are assigned unique IDs, avoiding any possibility of a naming conflict.

- H -

Home Page

The page that serves as the starting point of a World Wide Web site, sometimes named *default.html* or *index.html*.

Host

Any computer that provides services to remote computers or users.

HTML

Hypertext Markup Language. A tag-based notation language used to format documents that can then be interpreted and rendered by an Internet browser.

HTTP

Hypertext Transfer Protocol. A basic communication protocol for Internet or Web server file input and output (I/O).

Hyperlink

A connection to a document or other file on the Internet that generally appears as a highlighted word or image on the screen.

Hypertext

A hypertext document is a document that is structured in chunks of text, marked up (usually using HTML), and connected by links. Hence, the text in the document can properly be named hypertext because of its marked-up and navigable condition.

- I -

IDC

Internet Database Connector. Provides database connectivity between IIS applications and any ODBC-compliant database.

IEEE

Institute of Electrical and Electronic Engineers.

IETF

Internet Engineering Task Force. A protocol engineering and development organization focused on the Internet.

IIS

Microsoft Internet Information Server.

Inheritance

A programming technique that duplicates the characteristics down a hierarchy from one class to another.

In-process Server

An ActiveX Component that shares the same memory as the container application.

Instance

An object for which memory is allocated or persistent.

Instantiate

To create an instance of an object. The process of creating or activating an object based on its class.

Interface

A group of related functions that provide access to COM objects.

Internet

Abbreviation for Internetwork. A set of dissimilar computer networks joined together by means of gateways that handle data transfer and the conversion of messages from the sending network to the protocols used by the receiving networks.

Intranet

Use of Internet standards, technologies, and products within an enterprise to function as a collaborative processing infrastructure. The term intranet is generally used to describe the application of Internet technologies on internal corporate networks.

IP

Internet Protocol. The packet-switching protocol for network communications between Internet host computers.

ISAM

Indexed Sequential Access Method. An indexing mechanism for efficient access to rows of data in a file.

ISAPI

Internet Server Application Program Interface. An application program interface that resides on a server computer for initiating software services tuned for Microsoft Windows NT operating system.

ISDN

Integrated Services Digital Network. An emerging technology that is beginning to be offered by most telephone service providers as a faster alternative to traditional modems.

ISO

International Standards Organization. An organization involved in setting standards worldwide for all fields except electro-technical, which is the responsibility of IEC.

ISP

Internet Service Provider. An organization that provides access to the Internet.

ISV

Independent Software Vendor.

ITU

International Telecommunication Union.

- J -

Java

A derivative of the C++ language, Java is Sun Microsystems Corporation distributed programming language, offered as an open standard.

JavaScript

A scripting language that evolved from Netscape's LiveScript language and was made more compatible with Java. It uses an HTML page as its interface.

Java Beans

An object model being developed by Sun Microsystems Corporation that is targeted to inter-operate with a

variety of other object models, including COM and CORBA.

JDBC

Java Database Connectivity. Data access interfaces based on ODBC for use with the Java language.

Jet

A Microsoft desktop database engine available in most of Microsoft's development tools and office products, including Microsoft Access, Microsoft Office, and Microsoft Visual Basic.

JPEG

Joint Photographic Experts Group. A widely accepted international standard for compression of color image files, sometimes used on the Internet.

JScript

The Microsoft open implementation of JavaScript. JScript is fully compatible with JavaScript in Netscape Navigator version 2.0.

- K -

Kerberos

The basis of most of the distributed computing environment (DCE) security services. Kerberos provides the secure use of distributed software components.

- L -

Latency

The state of being latent, or to lie hidden; not currently showing signs of existence. Sometimes attributed to the time taken to retrieve pages from the World Wide Web.

LAN

Local Area Network. A connection among a set of computers. Computers connected to a LAN can generally share applications or files from a local file server and may be able to connect to other LANs or to the Internet using routers.

LDAP

Lightweight Directory Access Protocol. An open standard protocol (RFC 1777) that provides a way for Internet clients, applications, and servers to access directory services. LDAP was derived from the DAP X.500 protocol.

Link

See [Hyperlink](#).

- M -

Marshal

Also Marshalling. The process of packaging and sending interface parameters across process boundaries in computer memory.

Message Queuing

Server technology developers can use to build large-scale distributed systems with reliable communications between applications that can continue to operate reliably even when networked systems are unavailable.

Method

Member functions of an exposed object that perform some action on an object, such as saving it to disk.

MIME

Multipurpose Internet Mail Extensions. An extension of the Internet mail protocol that enables users to send 8-bit based e-mail messages, which are used to support extended character sets, voice mail, facsimile images, and so forth.

Moniker

A name that uniquely identifies a COM object, similar to a directory path name.

MTS

Microsoft Transaction Server. Combines the features of a transaction-processing (TP) monitor and an object-request broker (ORB) in an easy-to-use product.

Multi-tasking

The ability to simultaneously execute multiple applications within an operating system.

Multi-tier Architecture

Also known as three-tier, multi-tier is a technique for building applications generally split into user, business, and data services tiers. These applications are built of component services that are based on an object model such as ActiveX.

Multi-threading

Running several processes in rapid sequence within a single program, regardless of which logical method of multi-tasking is being used by the operating system.

- N -**NIST**

National Institute of Standards and Technology.

NNTP

Network News Transport Protocol. A news service protocol that is an extension of the TCP/IP local area network protocol. NNTP is the standard for Internet exchange of Usenet messages.

Node

A computer that is attached to a network; also called a *host*. Also, a junction of some kind. On a local area network, a device that is connected to the network and is capable of communicating with other network devices.

- O -**Object**

In object-oriented programming, a variable comprising both routines and data that is treated as a discrete entity.

OCX

File extension for an ActiveX Control or ActiveX Component. Originally used as a file extension for OLE Custom Controls, following the format for a Visual Basic Extension (VBX).

ODBC

Open Database Connectivity. A developer can use ODBC to access data in a heterogeneous environment of relational and non-relational databases.

ODBCDirect

Technology that makes the full functionality of RDO available from within DAO. Used to bypass the Microsoft Jet database engine for fast, small-memory-footprint access to remote data. See also [DAO](#), [Jet](#), and [RDO](#).

OLAP

Online Analytical Processing. A multi-dimensional database used for decision support analysis and data warehousing.

OLE

Object Linking and Embedding. A set of integration standards to transfer and share information among client applications.

OLE Automation

See [ActiveX Automation](#).

OLE Control

See [ActiveX Control](#).

OLE DB

Data-access interfaces providing consistent access to SQL and non-SQL data sources across the enterprise and the Internet.

OMG

Object Management Group. A vendor alliance formed to define and promote CORBA object specifications.

Open Group, The

Parent company of a number of standards organizations, including The Active Group—now managing the core ActiveX technology, X/Open, and OSF.

OSF

Open Software Foundation. A vendor alliance to define specifications, develop software, and make available an open, portable environment. Now merged with The Open Group.

ORB

Object Request Broker. Manages interaction between clients and servers including the distributed computing responsibilities of location referencing as well as coordinating parameters and results.

Out-of-Process

An ActiveX Component that runs in its own separate memory space separate from a container application.

- P -**PCT**

Private Communication Technology. Designed to provide secure transactions over the Internet.

PKCS

Public Key Certificate Standard. Syntax standards covering a number of security functions, including a standard way of attaching signatures to a block of data, a form for requesting a certificate, and public key encryption algorithms.

POP3

Post Office Protocol version 3. A messaging protocol commonly used on the Internet. It stores and forwards e-mail to users that log on to the mail server. POP uses the SMTP message format protocol.

PPP

Point-to-Point Protocol. The Internet standard for serial communications, PPP defines how data packets are exchanged with other Internet-based systems using a modem connection.

PPTP

Point-to-Point Tunneling Protocol. The Internet can be used for low-cost, secure remote access to a corporate network with virtual private networking support on Windows NT.

progID

A string expression that is the programmatic ID of the new object in a component.

Property

A set of characteristics of an object.

Proxy Server

A proxy server acts as a go-between, converting information from Web servers into HTML to be delivered to a client computer. It also provides a way to deliver network services to computers on a secure subnet without those computers needing to have direct access to the World Wide Web.

Protocol

A mutually determined set of formats and procedures for the exchange of information between computers.

- Q -**- R -****RAD**

Rapid Application Development.

RDO

Remote Data Objects. In version 2.0, RDO is a high-level object interface that directly calls ODBC for optimal speed, control, and ease of programming.

Router

An intermediary device on a communications network responsible for deciding by which of several paths message traffic will flow over a network or the Internet.

RPC

Remote Procedure Call. A mechanism that extends the notion of a local procedure call—meaning contained in a single memory address space

— to a distributed computing environment.

RSA

A public key cryptography for Internet security. This acronym derives from the last names of the inventors of the technology: Rivest, Shamir, and Adleman.

RTP/RTCP

Real-time protocol and real-time control protocol, respectively. A packet format for sending real-time information across the Internet.

- S -

Scalability

The capability to use the same software environment on many classes of computers and hardware configurations.

SET

Secure Electronic Transactions. A protocol for securing electronic credit card payments when conducting commerce across the Internet, which is broadly supported by companies in the computer and banking industries — including MasterCard and Visa.

Script

A kind of program that consists of a set of instructions for an application or utility program.

SDK

Software Development Kit.

SEPP

Secure Electronic Payment Process. A proposed specification that merged with STT, resulting in the SET standard for secure e-commerce transactions.

Server

A computer-running administrative software that controls access to all or part of a network and its resources.

SGML

Standard Generalized Markup Language. An original documentation markup standard promulgated by primary defense contractors as a standard for the development and display of documentation. HTML is a subset of SGML.

SMP

Symmetric Multiprocessing. A multiprocessor architecture in which all processors are identical, share memory, and execute both user code and operating system code.

SMTP

Simple Mail Transfer Protocol. The Internet standard protocol for transferring electronic mail messages from one computer to another.

SQL

Structured Query Language. The international standard language for defining and accessing relational databases.

SQL Access Group (SAG)

A consortium of vendors established in November 1989 to accelerate the Remote Data Access standard and to deliver protocols for interconnectivity among multiple SQL-based software products.

SSL

Secure Sockets Layer. A standard for providing encrypted and authenticated service over the Internet. Uses RSA public-key encryption for specific TCP/IP ports.

Stored Procedures

Pre-compiled software functions that are managed and that run within a remote database management system (RDBMS).

STT

Secure Transaction Technology. A proposed specification that merged with SEPP, resulting in the SET standard for secure e-commerce transactions.

Synchronous

A function that does not allow further instructions in the process—code

—to be executed until the function returns a value.

- T -

TCP/IP

Transmission Control Protocol/Internet Protocol. TCP/IP is a combined set of protocols that perform the transfer of data between two computers.

Telnet

A terminal emulation protocol users can employ to log on to other computers on the Internet. Alternatively, software that can be used to log on to another computer using the telnet protocol.

Three-tier Architecture

See [Multi-tier Architecture](#).

Transaction

A group of processing activities that are either entirely completed, or if not completed, that leave the database and processing system in the same state as before the transaction started.

TP

Transaction Processing. The real-time handling of computerized business transactions as they are received by the system. Also called online transaction processing (OLTP) systems.

Two-tier Architecture

See [Client/Server](#).

- U -

URL

Uniform Resource Locator. An address that uniquely identifies a World Wide Web site, usually preceded with *http://* such as in this fictitious URL *http://www.example.microsoft.com/*. A URL can contain more detail, such as the name of a page of hypertext, usually identified by the suffix *.html* or *.htm*.

- V -

VBA

Visual Basic, Applications Edition. The development environment and language found in Visual Basic that can be hosted by applications.

VBX

Visual Basic Extension. Custom controls originally designed for 16-bit applications created by Visual Basic.

Virtual Machine

The mechanism the Java language uses to execute Java bytecode on any physical computer. The VM converts the bytecode to the native instruction for the target computer.

Virtual Root

Also Vroot. A virtual tree of Web aliases that points to local, physical directories. This simplifies client URL addresses by presenting an entire set of content directories as a single directory tree.

VRML

Virtual Reality Modeling Language. A language for coding three-dimensional HTML applications.

- W -

W3C

World Wide Web Consortium.

Web Application

Also Web-based Application. A software program that uses HTTP for its core communication protocol and delivers Web-based information to the user in the HTML language.

Windows Sockets

Also Winsock. Winsock provides a single interface in Microsoft Windows to which multiple network software programs conform.

World Wide Web

Also the Web or WWW. The Web is a collection of Internet host systems that make these services available on the Internet using the HTTP protocol. Web-based information is usually delivered in the form of hypertext and hypermedia using HTML.

WOSA

Windows Open Services Architecture. An architecture and set of application programming interfaces for Windows that standardized the interfaces developers use in accessing underlying network services.

WYSIWYG

What You See Is What You Get. Authoring software programs that render a document on the computer screen the way it will appear in print, even as it is being edited.

- X -

XA

A transaction interoperability standard defined by X/Open. The Microsoft Transaction Server uses XA to connect with other transaction processing systems.

X.500 (including DAP)

Directory Access Protocol is a standard for global directory services.

X.509 Certificate

A protocol for a cryptographic certificate that contains a vendor's unique name and the vendor's public key.

X/Open

An independent consortium of international computer vendors created to establish multi-vendor standards based on *de facto* and *de jure* standards.

- Y -

- Z -

