

OVER
10,000
ENTRIES

Microsoft

Computer Dictionary

Fifth Edition

- *Fully updated with the latest technologies, terms, and acronyms*
- *Easy to read, expertly illustrated*
- *Definitive coverage of hardware, software, the Internet, and more!*



PUBLISHED BY

Microsoft Press

A Division of Microsoft Corporation

One Microsoft Way

Redmond, Washington 98052-6399

Copyright © 2002 by Microsoft Corporation

All rights reserved. No part of the contents of this book may be reproduced or transmitted in any form or by any means without the written permission of the publisher.

Library of Congress Cataloging-in-Publication Data

Microsoft Computer Dictionary.--5th ed.

p. cm.

ISBN 0-7356-1495-4

1. Computers--Dictionaries. 2. Microcomputers--Dictionaries.

AQ76.5. M52267 2002

004'.03--dc21

200219714

Printed and bound in the United States of America.

2 3 4 5 6 7 8 9 QWT 7 6 5 4 3 2

Distributed in Canada by H.B. Fenn and Company Ltd.

A CIP catalogue record for this book is available from the British Library.

Microsoft Press books are available through booksellers and distributors worldwide. For further information about international editions, contact your local Microsoft Corporation office or contact Microsoft Press International directly at fax (425) 936-7329. Visit our Web site at www.microsoft.com/mspress. Send comments to mspinput@microsoft.com.

Active Desktop, Active Directory, ActiveMovie, ActiveStore, ActiveSync, ActiveX, Authenticode, BackOffice, BizTalk, ClearType, Direct3D, DirectAnimation, DirectDraw, DirectInput, DirectMusic, DirectPlay, DirectShow, DirectSound, DirectX, Entourage, FoxPro, FrontPage, Hotmail, IntelliEye, IntelliMouse, IntelliSense, JScript, MapPoint, Microsoft, Microsoft Press, Mobile Explorer, MS-DOS, MSN, Music Central, NetMeeting, Outlook, PhotoDraw, PowerPoint, SharePoint, UltimateTV, Visio, Visual Basic, Visual C++, Visual FoxPro, Visual InterDev, Visual J++, Visual SourceSafe, Visual Studio, Win32, Win32s, Windows, Windows Media, Windows NT, Xbox are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries. Other product and company names mentioned herein may be the trademarks of their respective owners.

The example companies, organizations, products, domain names, e-mail addresses, logos, people, places, and events depicted herein are fictitious. No association with any real company, organization, product, domain name, e-mail address, logo, person, place, or event is intended or should be inferred.

Acquisitions Editor: Alex Blanton

Project Editor: Sandra Haynes

Body Part No. X08-41929

achieve personalization and privacy concomitantly, OPS is based on the concept of a Personal Profile, which is stored on the individual's computer and contains the user's unique identification, demographic and contact data, and possibly content preferences. This information remains under the user's control and can be released wholly or in part to the requesting site. *Acronym:* OPS. *See also* cookie, digital certificate.

open shop *n.* A computer facility that is open to users and not restricted to programmers or other personnel. An open shop is one in which people can work on or attempt to solve computer problems on their own rather than handing them over to a specialist.

Open Shortest Path First *n.* *See* OSPF.

Open Software Foundation *n.* *See* OSF.

open source *n.* The practice of making the source code (program instructions) for a software product freely available, at no cost, to interested users and developers, even though they were not involved in creating the original product. The distributors of open source software expect and encourage users and outside programmers to examine the code in order to identify problems, and to modify the code with suggested improvements and enhancements. Widely used open source products include the Linux operating system and the Apache Web server.

open standard *n.* A publicly available set of specifications describing the characteristics of a hardware device or software program. Open standards are published to encourage interoperability and thereby help popularize new technologies. *See also* standard (definition 2).

open system *n.* **1.** In communications, a computer network designed to incorporate all devices—regardless of the manufacturer or model—that can use the same communications facilities and protocols. **2.** In reference to computer hardware or software, a system that can accept add-ons produced by third-party suppliers. *See also* open architecture (definition 1).

Open Systems Interconnection reference model *n.* *See* ISO/OSI reference model.

OpenType *n.* A collaborative initiative by Microsoft and Adobe to unify support for Microsoft TrueType and Adobe PostScript Type 1 fonts. The OpenType font format enables font creators and users to work with the font type that best suits their needs without having to worry about

whether the font is based on TrueType or PostScript technology. *Also called:* TrueType Open version 2. *See also* PostScript font, TrueType.

Opera *n.* A Web browser developed by Opera Software S/A. Opera is notable for its strict W3C standards support. Opera is often chosen by Web developers to test Web sites for W3C compliance. *See also* W3C, Web browser.

operand *n.* The object of a mathematical operation or a computer instruction.

operating system *n.* The software that controls the allocation and usage of hardware resources such as memory, central processing unit (CPU) time, disk space, and peripheral devices. The operating system is the foundation software on which applications depend. Popular operating systems include Windows 98, Windows NT, Mac OS, and UNIX. *Acronym:* OS. *Also called:* executive.

operation *n.* **1.** A specific action carried out by a computer in the process of executing a program. **2.** In mathematics, an action performed on a set of entities that produces a new entity. Examples of mathematical operations are addition and subtraction.

operation code *n.* The portion of a machine language or assembly language instruction that specifies the type of instruction and the structure of the data on which it operates. *Also called:* opcode. *See also* assembly language, machine code.

operations research *n.* The use of mathematical and scientific approaches to analyze and improve efficiency in business, management, government, and other areas. Developed around the beginning of World War II, operations research was initially used to improve military operations during the war. The practice later spread to business and industry as a means of breaking down systems and procedures and studying their parts and interactions to improve overall performance. Operations research involves use of the critical path method, statistics, probability, and information theory.

operator *n.* **1.** In mathematics and in programming and computer applications, a symbol or other character indicating an operation that acts on one or more elements. *See also* binary¹, unary. **2.** A person who controls a machine or system such as a computer or telephone switchboard.

operator associativity *n.* A characteristic of operators that determines the order of evaluation in an expression

however, each type bar is bent 90 degrees at its halfway point, so the type bars stick straight up with the type facing away from the hub. *See also* thimble printer. *Compare* daisy wheel, daisy-wheel printer.

thimble printer *n.* A printer that uses a thimble print element, best known in a line of printers from NEC. Because these printers use fully formed characters like those on a typewriter, they generate letter-quality output that is indistinguishable from that of a typewriter. This includes the slight impression created by the type hitting the paper hard through the ribbon, which distinguishes this type of print-out from that of laser printers. *See also* thimble. *Compare* daisy-wheel printer.

thin client *n.* A software layer of a small client for a centrally managed, network terminal. The thin client allows the user access to server-hosted applications and data.

thin Ethernet *n.* *See* 10Base2.

thin film *adj.* A method used in the fabrication of integrated circuits. Thin film technology operates on the same basic principles as thick film technology. Rather than using inks or pastes, however, thin film technology uses metals and metal oxides that are “evaporated” and then deposited on the substrate in the desired pattern to form the integrated circuit’s passive components (wires, resistors, and capacitors). *See also* molecular beam epitaxy. *Compare* thick film.

thin film transistor *n.* *See* TFT.

ThinNet *n.* *See* 10Base2.

thin server *n.* A client/server architecture in which most of an application is run on the client machine, which is called a fat client, with occasional data operations on a remote server. Such a configuration yields good client performance, but complicates administrative tasks, such as software upgrades. *See also* client/server architecture, fat client, thin client. *Compare* fat server.

thin space *n.* An amount of horizontal space in a font, equal to one-quarter the point size of the font. For example, a thin space in a 12-point font is 3 points wide. *See also* point¹ (definition 1). *Compare* em space, en space, fixed space.

thin system *n.* *See* thin server.

ThinWire *n.* *See* 10Base2.

Third Generation *n.* *See* 3G.

third-generation computer *n.* Any of the computers produced from the mid-1960s to the 1970s that were based on integrated circuits rather than on separately wired transistors. *See also* computer.

third-generation language *n.* *See* 3GL.

third normal form *n.* *See* normal form (definition 1).

third-party¹ *adj.* In computer console games, a game made for a specific console by a company other than the console manufacturer.

third party² *n.* A company that manufactures and sells accessories or peripherals for use with a major manufacturer’s computer or peripheral, usually without any involvement from the major manufacturer.

thrashing *n.* The state of a virtual memory system that is spending almost all its time swapping pages in and out of memory rather than executing applications. *See also* swap (definition 2), virtual memory.

thread *n.* 1. In programming, a process that is part of a larger process or program. 2. In a tree data structure, a pointer that identifies the parent node and is used to facilitate traversal of the tree. 3. In electronic mail and Internet newsgroups, a series of messages and replies related to a specific topic.

threaded discussion *n.* In a newsgroup or other online forum, a series of messages or articles in which replies to an article are nested directly under it, instead of the articles being arranged in chronological or alphabetical order. *See also* newsgroup, thread (definition 3).

threaded newsreader *n.* A newsreader that displays posts in newsgroups as threads. Replies to a post appear directly after the original post, rather than in chronological or any other order. *See also* newsreader, post, thread (definition 3).

threaded tree *n.* A tree in which the leaf (end) nodes contain pointers to some of the nodes from which they arise. The pointers facilitate searching the tree for information. *See also* thread (definition 2).

threading *n.* A technique used by certain interpretive languages, such as many Forth implementations, to speed execution. The references to other support routines in each threaded support routine, such as a predefined word in Forth, are replaced by pointers to those routines. *See also* Forth, thread (definition 1).

three-dimensional array *n.* An ordered arrangement of information in which three numbers (integers) are used to