

# APPENDIX B



The Ultimate Computer Reference



CD-ROM  
Included



*The Comprehensive Standard for  
Business, School, Library, and Home*

Over  
**7,600**  
Terms

Additional Terms  
Available On Line  
Quarterly

# Microsoft Press Computer Dictionary

## Third Edition

- Over 300 illustrations and diagrams
- Extensive Internet coverage
- Featured in Microsoft® Bookshelf®
- Covers software, hardware, concepts, and more!

**Microsoft** Press

PUBLISHED BY  
Microsoft Press  
A Division of Microsoft Corporation  
One Microsoft Way  
Redmond, Washington 98052-6399

Copyright © 1997 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 Press Computer Dictionary. -- 3rd ed.

p. cm.

ISBN 1-57231-446-X

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

I. Microsoft Press.

QA76.15.M54 1997

004'.03--dc21

97-15489

CIP

Printed and bound in the United States of America.

1 2 3 4 5 6 7 8 9 QMQM 2 1 0 9 8 7

Distributed to the book trade in Canada by Macmillan of Canada, a division of Canada Publishing Corporation.

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.

Macintosh, Power Macintosh, QuickTime, and TrueType are registered trademarks of Apple Computer, Inc. Intel is a registered trademark of Intel Corporation. DirectInput, DirectX, Microsoft, Microsoft Press, MS-DOS, Visual Basic, Visual C++, Win32, Win32s, Windows, Windows NT, and XENIX are registered trademarks and ActiveMovie, ActiveX, and Visual J++ are trademarks of Microsoft Corporation. Java is a trademark of Sun Microsystems, Inc. Other product and company names mentioned herein may be the trademarks of their respective owners.

**Acquisitions Editor:** Kim Fryer

**Project Editor:** Maureen Williams Zimmerman, Anne Taussig

**Technical Editors:** Dail Magee Jr., Gary Nelson, Jean Ross, Jim Fuchs, John Conrow, Kurt Meyer, Robert Lyon, Roslyn Lutsch



which have speeds of 500 kilobits per second (Kbps), can generally transmit data faster than current conventional modems. *See also* coaxial cable, modem.

**cabling diagram** \kāˈbəl-ēng dīˈə-gram\ *n.* A plan that shows the path of cables that attach computer system components or peripherals. Cabling diagrams are particularly important for explaining the connection of disk drives to a disk controller.

**cache** \kash\ *n.* A special memory subsystem in which frequently used data values are duplicated for quick access. A memory cache stores the contents of frequently accessed RAM locations and the addresses where these data items are stored. When the processor references an address in memory, the cache checks to see whether it holds that address. If it does hold the address, the data is returned to the processor; if it does not, a regular memory access occurs. A cache is useful when RAM accesses are slow compared with the microprocessor speed, because cache memory is always faster than main RAM memory. *See also* disk cache, wait state.

**cache card** \kashˈkârd\ *n.* An expansion card that increases a system's cache memory. *See also* cache, expansion board.

**cache memory** \kashˈmemˈər-ē\ *n.* *See* cache.

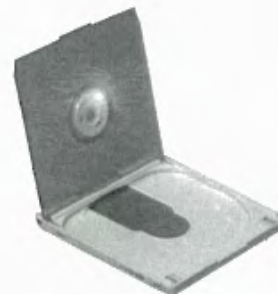
**CAD** \kad, CˈA-Dˈ\ *n.* Acronym for **computer-aided design**. A system of programs and workstations used in designing engineering, architectural, and scientific models ranging from simple tools to buildings, aircraft, integrated circuits, and molecules. Various CAD applications create objects in two or three dimensions, presenting the results as wire-frame "skeletons," as more substantial models with shaded surfaces, or as solid objects. Some programs can also rotate or resize models, show interior views, generate lists of materials required for construction, and perform other allied functions. CAD programs rely on mathematics, often requiring the computing power of a high-performance workstation. *See also* CAD/CAM, I-CASE.

**CAD/CAM** \kadˈkam, C-A-DˈC-A-Mˈ\ *n.* Acronym for **computer-aided design/computer-aided manufacturing**. The use of computers in both the design and manufacture of a product. With CAD/CAM, a product, such as a machine part, is designed with a CAD program and the finished design is translated into a set of instructions that

can be transmitted to and used by the machines dedicated to fabrication, assembly, and process control. *See also* CAD, I-CASE.

**CADD** \CˈA-D-Dˈ, kad-Dˈ\ *n.* *See* computer-aided design and drafting.

**caddy** \kadˈē\ *n.* A plastic carrier that holds a CD-ROM and is inserted into a CD-ROM drive. Some personal computers, especially older models, have CD-ROM drives that require the use of a caddy. Most current CD-ROM drives do not require a caddy. *See* the illustration.



*Caddy.*

**CAE** \CˈA-Eˈ\ *n.* Acronym for **computer-aided engineering**. An application that enables the user to perform engineering tests and analyses on designs created with a computer. In some instances, capabilities such as logic testing that are generally attributed to CAE applications are also part of CAD programs, so the distinction between CAD and CAE is not a hard-and-fast one. *See also* CAD, I-CASE.

**CAI** \CˈA-Iˈ\ *n.* Acronym for **computer-aided (or computer-assisted) instruction**. An educational program designed to serve as a teaching tool. CAI programs typically use tutorials, drills, and question-and-answer sessions to present a topic and to test the student's comprehension. CAI programs are excellent aids for presenting factual material and for allowing students to pace their learning speed. Subjects and complexity range from beginning arithmetic to advanced mathematics, science, history, computer studies, and specialized topics. *See also* I-CASE. *Compare* CBT, CMI.

**CAL** \CˈA-Lˈ\ *n.* Acronym for **computer-assisted (or computer-augmented) learning**. *See* CAI.

## virtual channel

application uses to reference memory. The memory management unit (MMU) translates this address into a physical address before the memory is actually read or written to. *See also* physical address, virtual memory. *Compare* real address.

**virtual channel** \vərˈchōō-əl chanˈəl\ *n.* In Asynchronous Transfer Mode (ATM), the path taken by data sent from one sender to one receiver. *See also* ATM (definition 1), virtual path (definition 2).

**virtual circuit** \vərˈchōō-əl sərˈkət\ *n.* A communications link that appears to be a direct connection between sender and receiver, although physically the link can be routed through a more circuitous path.

**virtual community** \vərˈchōō-əl kə-myōōˈnə-tē\ *n.* *See* online community.

**Virtual Control Program Interface** \vərˈchōō-əl kən-trōlˈ prōˈgram inˈtər-fās\ *n.* A specification for MS-DOS programs to allow access to extended memory under a multitasking environment (for example, Microsoft Windows) for 386 and higher-level processors. *Acronym:* VCPI (V-C-P-I). *See also* 80386DX, extended memory, multitasking. *Compare* protected mode.

**virtual desktop** \vərˈchōō-əl deskˈtɒp\ *n.* A desktop enhancement tool that provides access to the desktop when it is covered by open windows or that expands the size of the working desktop. *See also* desktop.

**virtual device** \vərˈchōō-əl də-vīs\ *n.* A device that can be referenced but that does not physically exist. Virtual-memory addressing, for example, uses magnetic disk storage to simulate memory larger than that physically available.

**virtual device driver** \vərˈchōō-əl də-vīsˈ drīˈvər\ *n.* Software in Windows 95 that manages a hardware or software system resource. If a resource retains information from one access to the next that affects the way it behaves when accessed (for example, a disk controller with its status information and buffers), a virtual device driver must exist for it. Virtual device drivers are described using three-letter abbreviations beginning with V and ending with D; the middle letter indicates the type of device, such as D for a display, P for a printer, T for a timer, and x when the type of device is not under discus-

## virtual monitor

sion. *Acronym:* VxD (V-X-D). *See also* device driver.

**virtual disk** \vərˈchōō-əl disk\ *n.* *See* RAM disk.

**virtual display device driver** \vərˈchōō-əl disˈplāˈ de-vīsˈ drīˈvər\ *n.* *See* virtual device driver.

**Virtual File Allocation Table** \vərˈchōō-əl fīlˈ al-ə-kāˈ shən tāˈ bl\ *n.* *See* VFAT.

**virtual image** \vərˈchōō-əl imˈej\ *n.* An image that is stored in computer memory but is too large to be shown in its entirety on the screen. Scrolling and panning are used to bring unseen portions of the image into view. *See also* virtual screen.

**virtual-image file** \vərˈchōō-əl imˈej fīl\ *n.* A file that specifies the material to be recorded onto a CD-ROM. A virtual-image file generally contains pointers to files that are distributed across a hard disk rather than gathered in one area. Since a complete copy of the material is not assembled, problems may occur in writing the CD-ROM due to delays in assembling the material from a scattered group of files. *See also* CD-ROM. *Compare* physical-image file.

**virtual LAN** \vərˈchōō-əl lanˈ, L-A-N\ *n.* Short for **virtual local area network**. A local area network consisting of groups of hosts that are on physically different segments but that communicate as though they were on the same wire. *See also* LAN.

**virtual machine** \vərˈchōō-əl mə-shēn\ *n.* Software that mimics the performance of a hardware device, such as a program that allows applications written for an Intel processor to be run on a Motorola chip. *Acronym:* VM (V-M).

**virtual memory** \vərˈchōō-əl memˈər-ē\ *n.* Memory that appears to an application to be larger and more uniform than it is. Virtual memory may be partially simulated by secondary storage such as a hard disk. Applications access memory through virtual addresses, which are translated (mapped) by special hardware and software onto physical addresses. *Acronym:* VM (V-M). *Also called* disk memory. *See also* paging, segmentation.

**virtual monitor** \vərˈchōō-əl monˈə-tər\ *n.* An enhanced monitor viewing system for visually impaired users that uses a virtual-reality headset to move enlarged text across the screen in a direction opposite to head motion. *See also* virtual reality.