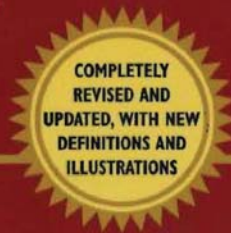


MICROSOFT PRESS®

COMPUTER DICTIONARY

SECOND EDITION



THE COMPREHENSIVE
STANDARD FOR
BUSINESS, SCHOOL,
LIBRARY, AND HOME



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

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Library of Congress Cataloging-in-Publication Data

Microsoft Press computer dictionary : the comprehensive standard for
business, school, library, and home / Microsoft Press. -- 2nd ed.

p. cm.

ISBN 1-55615-597-2

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

I. Microsoft Press. II. Title: Computer dictionary.

QA76.15.M54 1993

004'.03--dc20

93-29868

CIP

Printed and bound in the United States of America.

5 6 7 8 9 MLML 9 8 7 6 5

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

Distributed to the book trade outside the United States and Canada by
Penguin Books Ltd.

Penguin Books Ltd., Harmondsworth, Middlesex, England
Penguin Books Australia Ltd., Ringwood, Victoria, Australia
Penguin Books N.Z. Ltd., 182-190 Wairau Road, Auckland 10, New Zealand

British Cataloging-in-Publication Data available.

Project Editor: Casey D. Doyle

Manuscript Editor: Alice Copp Smith

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printing in which the print head makes more than one pass across the page for each printed line, printing each line a second time exactly on top of the first pass. Multiple-pass printing can be used with dot-matrix printers to darken the print and smooth out errors in alignment. On better printers, a second pass might occur after the paper is moved up slightly, so that the dots in the characters overlap to create a crisper, darker image.

multiple regression A statistical technique that seeks to describe the behavior of a so-called "dependent" variable in terms of the observed behavior of numerous other "independent" variables thought to affect it. For each independent variable, a regression analysis can determine the degree to which variations in the independent variable cause changes in the dependent variable (the correlation coefficient of the independent variable).

multiple-user system See multiuser system.

multiplexer A hardware circuit for selecting a single output from multiple inputs; also, a device for funneling several different streams of data over a common communications line. Multiplexers are used to attach many communications lines to a smaller number of communications ports or to attach a large number of communications ports to a smaller number of communications lines.

multiplexer channel One of the inputs to a multiplexer. See also multiplexer.

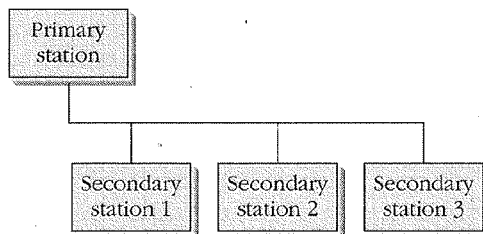
multiplexing A technique used in communications and input/output operations for transmitting a number of separate signals simultaneously over a single channel or line. To maintain the integrity of each signal on the channel, multiplexing can separate the signals by time, space, or frequency. The device used to combine the signals is a multiplexer. See also frequency-division multiplexing, space-division multiplexing, time-division multiplexing.

multiplier In multiplication, the number that is multiplied by another number, the multiplicand. In arithmetic, the multiplicand and the multiplier are interchangeable, depending on how the problem is stated, because the result is the same if the two are reversed—for example, 2×3 and

3×2 . In arithmetic performed by computers, however, the multiplicand is different from the multiplier because computer multiplication is usually performed as addition. Therefore, 2×3 means "add 2 three times," whereas 3×2 means "add 3 two times." Compare multiplier.

multiplier In arithmetic, the number that indicates how many times another number (the multiplicand) is multiplied. In computing, *multiplier* also refers to an electronic device independent of the central processing unit (CPU) that performs multiplication by adding the multiplicand according to the value of the digits in the multiplier.

multiport configuration A communications link in which multiple stations are connected sequentially to the same communications line. Typically, the communications line is controlled by a primary station, such as a computer, and the stations attached to the line are secondary, as shown in the illustration.



Multipoint configuration.

multiprocessing A mode of operation in which two or more connected and roughly equal processing units each carry out one or more processes (programs or sets of instructions) in tandem. In multiprocessing, each processing unit works on a different set of instructions (or on different parts of the same process). The objective is increased speed or computing power, the same as in parallel processing and in the use of special units called coprocessors. In parallel processing, however, multiple processes are carried out simultaneously (rather than concurrently) within a single system. In coprocessing, a separate unit such as a math coprocessor chip is designed to handle certain tasks with a high degree of