

The background of the book cover is a complex, abstract pattern of overlapping, translucent, geometric shapes in various colors including blue, purple, yellow, and green. The shapes create a sense of depth and movement, resembling a crystalline or molecular structure.

**McGraw-Hill**

**DICTIONARY OF  
SCIENTIFIC AND  
TECHNICAL  
TERMS**

**Fifth Edition**

**On the cover: Photomicrograph of crystals of vitamin B<sub>1</sub>.  
(Dennis Kunkel, University of Hawaii)**

Included in this Dictionary are definitions which have been published previously in the following works: P. B. Jordain, *Condensed Computer Encyclopedia*, Copyright © 1969 by McGraw-Hill, Inc. All rights reserved. J. Markus, *Electronics and Nucleonics Dictionary*, 4th ed., Copyright © 1960, 1966, 1978 by McGraw-Hill, Inc. All rights reserved. J. Quick, *Artists' and Illustrators' Encyclopedia*, Copyright © 1969 by McGraw-Hill, Inc. All rights reserved. *Blakiston's Gould Medical Dictionary*, 3d ed., Copyright © 1956, 1972 by McGraw-Hill, Inc. All rights reserved. T. Baumeister and L. S. Marks, eds., *Standard Handbook for Mechanical Engineers*, 7th ed., Copyright © 1958, 1967 by McGraw-Hill, Inc. All rights reserved.

In addition, material has been drawn from the following references: R. E. Huschke, *Glossary of Meteorology*, American Meteorological Society, 1959; *U.S. Air Force Glossary of Standardized Terms*, AF Manual 11-1, vol. 1, 1972; *Communications-Electronics Terminology*, AF Manual 11-1, vol. 3, 1970; W. H. Allen, ed., *Dictionary of Technical Terms for Aerospace Use*, 1st ed., National Aeronautics and Space Administration, 1965; J. M. Gilliland, *Solar-Terrestrial Physics: A Glossary of Terms and Abbreviations*, Royal Aircraft Establishment Technical Report 67158, 1967; *Glossary of Air Traffic Control Terms*, Federal Aviation Agency; *A Glossary of Range Terminology, White Sands Missile Range, New Mexico*, National Bureau of Standards, AD 467-424; *A DOD Glossary of Mapping, Charting and Geodetic Terms*, 1st ed., Department of Defense, 1967; P. W. Thrush, comp. and ed., *A Dictionary of Mining, Mineral, and Related Terms*, Bureau of Mines, 1968; *Nuclear Terms: A Glossary*, 2d ed., Atomic Energy Commission; F. Casey, ed., *Compilation of Terms in Information Sciences Technology*, Federal Council for Science and Technology, 1970; *Glossary of Stinfo Terminology*, Office of Aerospace Research, U.S. Air Force, 1963; *Naval Dictionary of Electronic, Technical, and Imperative Terms*, Bureau of Naval Personnel, 1962; *ADP Glossary*, Department of the Navy, NAVSO P-3097.

**McGRAW-HILL DICTIONARY OF SCIENTIFIC AND TECHNICAL TERMS,  
Fifth Edition**

Copyright © 1994, 1989, 1984, 1978, 1976, 1974 by McGraw-Hill, Inc. All rights reserved. Printed in the United States of America. Except as permitted under the United States Copyright Act of 1976, no part of this publication may be reproduced or distributed in any form or by any means, or stored in a database or retrieval system, without the prior written permission of the publisher.

2 3 4 5 6 7 8 9 0    DOW/DOW    9 9 8 7 6 5 4

ISBN 0-07-042333-4

**Library of Congress Cataloging-in-Publication Data**

McGraw-Hill dictionary of scientific and technical terms /  
Sybil P. Parker, editor in chief.—5th ed.  
p.    cm.  
ISBN 0-07-042333-4  
1. Science—Dictionaries.    2. Technology—Dictionaries.  
I. Parker, Sybil P.  
Q123.M34    1993  
503—dc20  
93-34772  
CIP

**INTERNATIONAL EDITION**

Copyright © 1994. Exclusive rights by McGraw-Hill, Inc. for manufacture and export. This book cannot be re-exported from the country to which it is consigned by McGraw-Hill. The International Edition is not available in North America.

When ordering this title, use ISBN 0-07-112584-7

but  $\sqrt{b}$  and  $\sqrt{d}$  are not both rational. Also known as conjugate binomial surds. { 'kän-jəgət 'rad-əkälz }

**conjugate roots** [MATH] Conjugate complex numbers which are roots of a given equation. { 'kän-jəgət 'rüts }

**conjugate ruled surface** [MATH] The ruled surface whose rulings are the lines that are tangent to a given ruled surface at the points of its line of striction and are perpendicular to the rulings of the given ruled surface at these points. { 'kän-jəgət 'rüld 'sərfəs }

**conjugate space** [MATH] The set of all continuous linear functionals defined on a normed linear space. { 'kän-jəgət 'späs }

**conjugate subgroups** [MATH] Two subgroups  $A$  and  $B$  of a group  $G$  for which there exists an element  $x$  in  $G$  such that  $B$  consists of the elements of the form  $xax^{-1}$ , where  $a$  is in  $A$ . { 'kän-jəgət 'səb,grüps }

**conjugate system of curves** [MATH] Two one-parameter families of curves on a surface such that a unique curve of each family passes through each point of the surface, and the directions of the tangents to these two curves at any point on the surface are the conjugate directions at that point. { 'kän-jəgət 'sis-təm əv 'kərvz }

**conjugate triangles** [MATH] Two triangles in which the poles of the sides of each with respect to a given curve are the vertices of the other. { 'kän-jəgət 'tri,anjəgz }

**conjugate variables** [QUANT MECH] A pair of physical variables describing a quantum-mechanical system such that their commutator is a nonzero constant; either of them, but not both, can be precisely specified at the same time. Also known as complementary variables. { 'kän-jəgət 'ver-ē-əbəlz }

**conjugon** [GEN] Any of a number of different genetic elements in bacterial deoxyribonucleic acid that promote bacterial conjugation and gene transfer. { 'kän-jəgän }

**conjugation** [BOT] Sexual reproduction by fusion of two protoplasts in certain thallophytes to form a zygote. [INV ZOO] Sexual reproduction by temporary union of cells with exchange of nuclear material between two individuals, principally ciliate protozoans. [MICROBIO] A process involving contact between two bacterial cells during which genetic material is passed from one cell to the other. { 'kän-jəgə'shən }

**conjunction** [ASTRON] 1. The situation in which two celestial bodies have either the same celestial longitude or the same sidereal hour angle. 2. The time at which this conjunction takes place. [MATH] The connection of two statements by the word "and." { kən'jəŋk'shən }

**conjunctiva** [ANAT] The mucous membrane covering the eyeball and lining the eyelids. { kən'jəŋk-tə-və }

**conjunctive matrices** [MATH] Two matrices  $A$  and  $B$  related by the transformation  $B = SAT$ , where  $S$  and  $T$  are nonsingular matrices and  $S$  is the Hermitian conjugate of  $T$ . { kən'jəŋk-tiv 'mä-trə,sēz }

**conjunctive search** [COMPUT SCI] A search to identify items having all of a certain set of characteristics. { kən'jəŋk-tiv 'sərch }

**conjunctive transformation** [MATH] The transformation  $B = SAT$ , where  $S$  is the Hermitian conjugate of  $T$ , and matrices  $A$  and  $B$  are equivalent. { kən'jəŋk-tiv 'tranz-fər'mā'shən }

**conjunctivitis** [MED] Inflammation of the conjunctiva. { kən'jəŋk-tə'vī-dəs }

**conn** [NAV] To direct or conduct the steering of a vessel; to give orders to the helmsman on steering the ship. { kən }

**connarite** [MINERAL] A green mineral consisting of hydrous nickel silicate occurring as small crystals or grains. { 'kän-ə,rīt }

**connate** [GEOL] Referring to materials involved in sedimentary processes that are contemporaneous with surrounding materials. [SCI TECH] Born, originated, or produced in a united or fused condition. { kə'nät }

**connate leaf** [BOT] A leaf shaped as though the bases of two opposite leaves had fused around the stem. { kə'nät 'lēf }

**connate water** [HYD] Water entrapped in the interstices of igneous rocks when the rocks were formed; usually highly mineralized. { kə'nät 'wöd-ər }

**connected graph** [MATH] A graph in which each pair of points is connected by a path. { kə'nek-təd 'gräf }

**connected load** [ELEC] The sum of the continuous power ratings of all load-consuming apparatus connected to an electric

power distribution system or any part thereof. { kə'nek-təd 'löd }

**connected set** [MATH] A set in a topological space which is not the union of two nonempty sets  $A$  and  $B$  for which both the intersection of the closure of  $A$  with  $B$  and the intersection of the closure of  $B$  with  $A$  are empty; intuitively, a set with only one piece. { kə'nek-təd 'set }

**connected space** [MATH] A topological space which cannot be written as the union of two nonempty disjoint open subsets. { kə'nek-təd 'späs }

**connected surface** [MATH] A surface between any two points of which there is a continuous path that does not cross the surface's boundary. { kə'nek-təd 'sərfəs }

**connect function** [COMPUT SCI] A signal sent over a data line to a selected peripheral device to connect it with the central processing unit. { kə'nekt,fəŋk'shən }

**connecting bar** See tombolo. { kə'nekt-ŋ, bär }

**connecting circuit** [ELECTR] A functional switching circuit which directly couples other functional circuit units to each other to exchange information as dictated by the momentary needs of the switching system. { kə'nekt-ŋ, sər-kət }

**connecting rod** [MECH ENG] Any straight link that transmits motion or power from one linkage to another within a mechanism, especially linear to rotary motion, as in a reciprocating engine or compressor. { kə'nekt-ŋ, rəd }

**connection box** [COMPUT SCI] A mechanical device for altering electrical connections between various terminals, used to control the operations of a punched-card machine; its function is similar to that of a plug board. { kə'nek'shən, 'bäks }

**connection gas** [PETRO ENG] Gas that is introduced into a well when the mud pump is shut off in order to make a connection. { kə'nek'shən, 'gäs }

**connective tissue** [HISTOL] A primary tissue, distinguished by an abundance of fibrillar and nonfibrillar extracellular components. { kə'nek-tiv 'tīsh-ü }

**connectivity number** [MATH] 1. The number of points plus 1 which can be removed from a curve without separating the curve into more than one piece. 2. The number of closed cuts or cuts joining points of previous cuts (or joining points on the boundary) plus 1 which can be made on a surface without separating the surface. Also known as Betti number. 3. In general, the  $n$ -dimensional connectivity number of a topological space  $X$  is the number of infinite cyclic groups whose direct sum with the torsion group  $G_n(X)$  forms the homology group  $H_n(X)$ . { kə'nek-tiv-əd-ē, 'nəm-bər }

**connector** [COMPUT SCI] In database management, a pointer or link between two data structures. [ELECTR] A switch, or relay group system, which finds the telephone line being called as a result of digits being dialed; it also causes interrupted ringing voltage to be placed on the called line or of returning a busy tone to the calling party if the line is busy. [ENG] 1. A detachable device for connecting electrical conductors. 2. A metal part for joining timbers. 3. A symbol on a flowchart indicating that the flow jumps to a different location on the chart. { kə'nek-tər }

**connector block** [ELECTR] A device for connecting two cables without using plugs, similar to a barrier strip but larger, in which wires from one cable are attached to lugs of screws on one side, and wires from the other cable are fastened to corresponding points on the opposite side. { kə'nek-tər, 'bläk }

**connect time** [COMPUT SCI] The time that a user at a terminal is signed on to a computer. { kə'nekt, 'tīm }

**connellite** [MINERAL]  $\text{Cu}_{19}(\text{SO}_4)\text{Cl}_4(\text{OH})_{32}\cdot 3\text{H}_2\text{O}$  A deep blue striated copper mineral; crystals are in the hexagonal system. Also known as footeite. { 'kän-əl,īt }

**connexon** [CYTOL] Any of the cylindrical channels associated with gap junctions. { kə'nek,sən }

**conning tower** [NAV ARCH] 1. The raised observation post of a submarine, which is in addition usually used as an entrance or exit. 2. The armored pilothouse of a warship. { 'kän-ŋ, 'taɪ-ər }

**conivent** [BIOL] Converging so as to meet, but not fused into a single part. { kə'niv-ənt }

**Conoclypidae** [PALEON] A family of Cretaceous and Eocene exocyclic Euechinoidea in the order Holecypoida having developed aboral petals, internal partitions, and a high test. { 'kän-ō'klə'pid-ē,ē }

**Conocyeminae** [PALEON] A subfamily of Mesozoan parasitites in the family Dicyemidae. { 'kän-ə,sī'em-ə,nē }

### CONNATE LEAF



Shape of a connate leaf.

### CONNECTING CIRCUIT

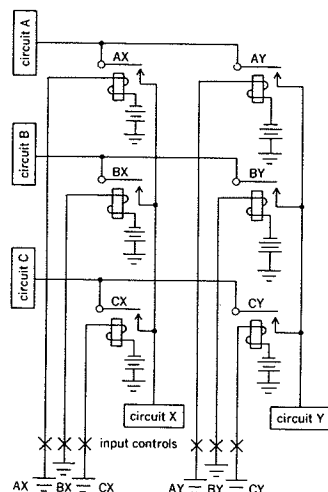


Diagram of a connecting circuit.

...are uniformly distributed over a part of phase space whose energies lie within an infinitesimal range. { 'mī·krō·kəm 'pyüid·ər }

**microcomputer development system** [COMPUT SCI] A complete microcomputer system that is used to test both the software and hardware of other microcomputer-based systems. { 'mī·krō·kəm 'pyüid·ər di'vel·əp·mənt 'sis·təm }

**microconsumer** See decomposer. { 'mī·krō·kən'sü·mər }

**microcontroller** [ELECTR] A microcomputer, microprocessor, or other equipment used for precise process control in data handling, communication, and manufacturing. { 'mī·krō·kən'tröl·ər }

**microcopy** [GRAPHICS] A photographic reproduction that is too small to be read without magnification. { 'mī·krō·kəp·ē }

**microcoquina** [PETR] A clastic limestone composed wholly or partially of cemented sand-size particles of shell detritus. { 'mī·krō·kə'kē·nə }

**Microcotyloidea** [INV ZOO] A superfamily of ectoparasitic trematodes in the subclass Monogenea. { 'mī·krō·käd·əl'öid·eə }

**microcoulomb** [ELEC] A unit of electric charge equal to one-millionth of a coulomb. Abbreviated  $\mu\text{C}$ . { 'mī·krō'kü·läm }

**microcrack** See microfissure. { 'mī·krō·krak }

**microcrystalline** [CRYSTAL] Composed of or containing crystals that are visible only under the microscope. { 'mī·krō'krist·əl·ən }

**microcrystalline wax** [MATER] A petroleum wax containing small, indistinct crystals, and having a higher molecular weight, melting point, and viscosity than paraffin wax; used in laminated paper and electrical coil coating. { 'mī·krō'krist·əl·ən 'waks }

**Microcyprini** [VERT ZOO] The equivalent name for Cyprinodontiformes. { 'mī·krō·sə'prē·nē }

**microcyst** [MED] A very small cyst. { 'mī·krō'sist }

**microcyte** [MED] A red blood cell whose diameter or mean corpuscular volume or both are more than two standard deviations below the normal mean. Also known as microerythrocyte. { 'mī·krō'sit }

**microcythemia** [MED] Blood characterized by the presence of small red blood cells. { 'mī·krō'sī'thē·mē·ə }

**microcytic anemia** [MED] Any form of anemia in which small erythrocytes occur in the blood. { 'mī·krō'sid·ik ə'nē·mē·ə }

**microcytosis** [MED] A blood disorder characterized by a preponderance of microcytes. { 'mī·krō'sī'tō'səs }

**microdactyly** [MED] A condition of abnormal smallness of fingers or toes. { 'mī·krō'dak·tə·lē }

**microdensitometer** [SPECT] A high-sensitivity densitometer used in spectroscopy to detect spectrum lines too faint on a negative to be seen by the human eye. { 'mī·krō'den·sə'täm·əd·ər }

**microdiagnostic program** [COMPUT SCI] A microprogram that tests a specific hardware component, such as a bus or store location, for faults. { 'mī·krō'dī·əg'näs·tik 'prō·grəm }

**microdiffusimeter** [ENG] A type of diffusimeter in which diffusion is measured over microscopic distances, greatly reducing the time required for the measurement and the effects of vibration and temperature changes. { 'mī·krō'də'fyüz·ər }

**microdisk** [COMPUT SCI] A small floppy disk with a diameter between 3 and 4 inches (7 and 10 centimeters). Also known as microfloppy disk. { 'mī·krō'disk }

**microdissection** [BIOL] Dissection under a microscope. { 'mī·krō'di'sek·shən }

**Microdomatacea** [PALEON] An extinct superfamily of gastropod mollusks in the order Aspidobranchia. { 'mī·krō'dō·mə'tās·ē·ə }

**microearthquake** [GEOPHYS] An earthquake with a low intensity, usually less than 3 on the Richter scale. Also known as microquake. { 'mī·krō'ərth·kwäk }

**microelectrolysis** [PHYS CHEM] Electrolysis of small quantities of material. { 'mī·krō·i·lek'träl·əs·əs }

**microelectronic circuitry** See microcircuitry. { 'mī·krō·i·lek'trän·ik 'sər·kə·trē }

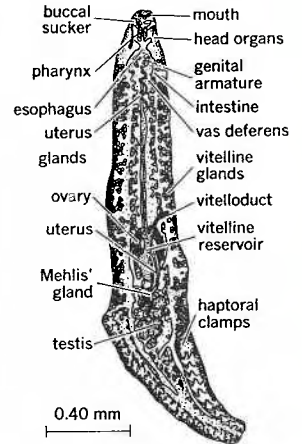
**microelectronics** [ELECTR] The technology of constructing circuits and devices in extremely small packages by various techniques. Also known as microminiaturization; microsystem

MICROCERCIOUS CERCARIA



Drawing of a microcercous cercaria showing small tail. (From R. M. Cable, An Illustrated Laboratory Manual of Parasitology, Burgess, 1958)

MICROCOTYLOIDEA



Ventral view of Heteraxinoides xanthophilis (Hargis), an ectoparasite of the spot fish (Leiostomus xanthurus).

instead of each user getting an individual narrow band. { 'ran-dəm 'ak,ses di'skrēt ə'dres }

**random-access disk file** [COMPUT SCI] A file which is contained on a disk having one head per track and in which consecutive records are not necessarily in consecutive locations. { 'ran-dəm 'ak,ses 'disk ,fil }

**random-access input/output** [COMPUT SCI] A technique which minimizes seek time and overlaps with processing. { 'ran-dəm 'ak,ses 'in,püt 'aüt,püt }

**random-access memory** [COMPUT SCI] A data storage device having the property that the time required to access a randomly selected datum does not depend on the time of the last access or the location of the most recently accessed datum. Abbreviated RAM. Also known as direct-access memory; direct-access storage; random-access storage; random storage; uniformly accessible storage. { 'ran-dəm 'ak,ses 'mem-rē }

**random-access programming** [COMPUT SCI] Programming without regard for the time required for access to the storage positions called for in the program, in contrast to minimum-access programming. { 'ran-dəm 'ak,ses 'prō,gram-iŋ }

**random-access storage** See random-access memory. { 'ran-dəm 'ak,ses 'stōr-ij }

**random coil** [PHYS CHEM] Any of various irregularly coiled polymers that can occur in solution. Also known as cyclic coil. { 'ran-dəm 'kōil }

**random copolymer** [ORG CHEM] Resin copolymer in which the molecules of each monomer are randomly arranged in the polymer backbone. { 'ran-dəm kō'pāl-i-mər }

**random diffusion chamber** See reverberation chamber. { 'ran-dəm di'fyü-zhən ,chām-bər }

**random digit** [STAT] Digit taken from a table of random numbers according to some specified probability rule. { 'ran-dəm 'dij-ət }

**random error** [STAT] An error that can be predicted only on a statistical basis. { 'ran-dəm 'er-ər }

**random experiments** [STAT] Experiments which do not always yield the same result when repeated under the same conditions. { 'ran-dəm ik'sper-ə-məns }

**random forecast** [METEOROL] A forecast in which one of a set of meteorological contingencies is selected on the basis of chance; it is often used as a standard of comparison in determining the degree of skill of another forecast method. { 'ran-dəm 'fōr,kast }

**random function** [MATH] A function whose domain is an interval of the extended real numbers and has range in the set of random variables on some probability space; more precisely, a mapping of the cartesian product of an interval in the extended reals with a probability space to the extended reals so that each section is a random variable. { 'ran-dəm 'fəŋk-shən }

**random interstratification** [SOLID STATE] A crystalline structure in which two or more types of layers alternate in a random fashion. { 'ran-dəm ,in-tər,stra-ti-fə'kā-shən }

**randomization** [STAT] Assigning subjects to treatment groups by use of tables of random numbers. { ,ran-də-mə'zā-shən }

**randomized blocks** [STAT] An experimental design in which the various treatments are reproduced in each of the blocks and are randomly assigned to the units within the blocks, permitting unbiased estimates of error to be made. { 'ran-də,mīzd 'bläks }

**randomized jitter** [ELECTR] Jitter by means of noise modulation. { 'ran-də,mīzd 'jid-ər }

**randomized test** [STAT] Acceptance or rejection of the null hypothesis by use of a random variable to decide whether an observation causes rejection or acceptance. { 'ran-də,mīzd 'test }

**randomizing scheme** [COMPUT SCI] A technique of distributing records among storage modules to ensure even distribution and seek time. { 'ran-də,mīz-iŋ ,skēm }

**random length** [ENG] One of a group of various lengths of pipe as delivered by the manufacturer, usually 13-23 feet (4-7 meters) long. Also known as mill length. { 'ran-dəm 'lengθ }

**random line** [ENG] A trial surveying line that is directed as closely as circumstances permit toward a fixed terminal point that cannot be seen from the initial point. Also known as random traverse. { 'ran-dəm 'līn }

arising in control theory. [PHYS] Noise characterized by a large number of overlapping transient disturbances occurring at random, such as thermal noise and shot noise. Also known as fluctuation noise. { 'ran-dəm 'nōiz }

**random number generator** [COMPUT SCI] 1. A mathematical program which generates a set of numbers which pass a randomness test. 2. An analog device that generates a randomly fluctuating variable, and usually operates from an electrical noise source. { 'ran-dəm 'nəm-bər ,jen-ə,rād-ər }

**random numbers** [MATH] A listing of numbers which is nonrepetitive and satisfies no algorithm. { 'ran-dəm 'nəm-bərz }

**random ordered sample** [STAT] An ordered sample of size  $s$  drawn from a population of size  $N$  such that the probability of any particular ordered sample is the reciprocal of the number of permutations of  $N$  things taken  $s$  at a time. { 'ran-dəm 'ōr-dərd 'səm-pəl }

**random process** See stochastic process. { 'ran-dəm 'prā-səs }

**random pulsing** [COMMUN] Continuous, varying, pulse-repetition rate, accomplished by noise modulation or continuous frequency change. { 'ran-dəm 'pəls-iŋ }

**random sampling** [STAT] A sampling from some population where each entry has an equal chance of being drawn. { 'ran-dəm 'səm-pliŋ }

**random-sampling voltmeter** [ENG] A sampling voltmeter which takes samples of an input signal at random times instead of at a constant rate; the synchronizing portions of the instrument can then be simplified or eliminated. { 'ran-dəm 'səm-pliŋ 'völt,mēd-ər }

**random sequence** [MET] A longitudinal sequence of weld beads deposited in random increments. { 'ran-dəm 'sē-kwəns }

**random start** [STAT] In a systematic sample, the random selection of a starting point in the first sample block followed by taking that value in the same position in every succeeding block. { 'ran-dəm 'stārt }

**random storage** See random-access memory. { 'ran-dəm 'stōr-ij }

**random structure** [CRYSTAL] A crystal structure in which different types of atoms are associated with the various points in a crystal lattice in a random fashion. { 'ran-dəm 'strək-chər }

**random superimposed coding** [COMPUT SCI] A system of coding in which a set of random numbers is assigned to each concept to be encoded; with punched cards, each number corresponds to some one hole to be punched in a given field. { 'ran-dəm 'sü-pər-im'pōzd 'kōd-iŋ }

**random traverse** See random line. { 'ran-dəm trə'vərs }

**random variable** [MATH] A measurable function on a probability space; usually real valued, but possibly with values in a general measurable space. Also known as chance variable; stochastic variable; variate. { 'ran-dəm 'ver-ə-bəl }

**random vector** See diverse vector. { 'ran-dəm 'vek-tər }

**random vibration** [MECH] A varying force acting on a mechanical system which may be considered to be the sum of a large number of irregularly timed small shocks; induced typically by aerodynamic turbulence, airborne noise from rocket jets, and transportation over road surfaces. { 'ran-dəm vī'brā-shən }

**random walk** [MATH] A succession of movements along line segments where the direction and possibly the length of each move is randomly determined. { 'ran-dəm 'wōk }

**random winding** [ELEC] A coil winding in which the turns are positioned haphazardly rather than in layers. { 'ran-dəm 'wind-iŋ }

**Raney nickel** [MET] A nickel powder prepared from an alloy of nickel and aluminum in equal parts by preferentially dissolving the aluminum in a warm solution of sodium hydroxide. { 'rā-nē ,nik-əl }

**rang** [PETR] A unit of subdivision in the C.I.P.W. (Cross-Iddings-Pirsson-Washington) classification of igneous rocks. { rāŋ }

**range** [CIV ENG] Any series of contiguous townships of the U.S. Public Land Survey system. [COMMUN] 1. In printing telegraphy, that fraction of a perfect signal element through which the time of selection may be varied to occur earlier or

# Explore Litigation Insights

Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

## Real-Time Litigation Alerts



Keep your litigation team up-to-date with **real-time alerts** and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

## Advanced Docket Research



With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

## Analytics At Your Fingertips



Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

## API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

## LAW FIRMS

Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

## FINANCIAL INSTITUTIONS

Litigation and bankruptcy checks for companies and debtors.

## E-DISCOVERY AND LEGAL VENDORS

Sync your system to PACER to automate legal marketing.