

Exhibit 6



Academic Press Dictionary of Science and Technology

Edited by
Christopher Morris



Academic Press

Harcourt Brace Jovanovich, Publishers

San Diego New York Boston London Sydney Tokyo Toronto

This book is printed on acid-free paper. ∞

Copyright © 1992 by ACADEMIC PRESS, INC.

All Rights Reserved.

No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopy, recording, or any information storage and retrieval system, without permission in writing from the publisher.

Academic Press, Inc.

1250 Sixth Avenue, San Diego, California 92101-4311

United Kingdom Edition published by

Academic Press Limited

24-28 Oval Road, London NW1 7DX

Library of Congress Cataloging-in-Publication Data

Academic Press dictionary of science and technology / edited by

Christopher Morris

p. cm.

ISBN 0-12-200400-0

I. Science--Dictionaries. 2. Technology--Dictionaries.

I. Morris, Christopher G. II. Academic Press. III. Title:

Dictionary of science and technology.

Q123.A33 1991

503--dc20

90-29032

CIP

PRINTED IN THE UNITED STATES OF AMERICA

92 93 94 95 96 97 DO 9 8 7 6 5 4 3 2 1

scale model *Graphic Arts*. a three-dimensional model in which each element is shown in the same proportion to an existing or proposed object or structure.

scalene triangle [skā'lēn] *Mathematics*. a triangle having no two sides of equal length; equivalently, a triangle having no two angles equal.

scalenoedron *Crystallography*. a closed crystal form whose faces are scalene triangles.

scalenus *Anatomy*. a group of anterior thoracic muscles that extend from the cervical vertebrae to the upper ribs.

scale of impact see LIFE-CHANGE SCALE.

scale property *Mathematics*. the property that $\|\lambda x\| = |\lambda| \|x\|$, where $\|x\|$ indicates the norm of a vector x and λ is a scalar; also called homogeneity (of degree one).

scaler *Medicine*. an instrument used to remove deposits from tooth surfaces. *Electronics*. 1. a device that generates an output pulse after a specified number of input pulses are received; used to count pulses in digital computers. Also, SCALING CIRCUIT. 2. a device that lengthens the frequency range of another device. *Radiology*. an electronic instrument that counts radiation-induced pulses from a detector, amplifier, electric window, or other radiation detector.

scale scar *Botany*. a mark on a stem where a scale was once attached.

scale-up *Design Engineering*. a design process in which a model-sized prototype is used to design a large, usually commercial-sized unit.

Scalibregmidae *Invertebrate Zoology*. a family of deep-sea mud-ingesting polychaete worms in the subclass Sedentaria.

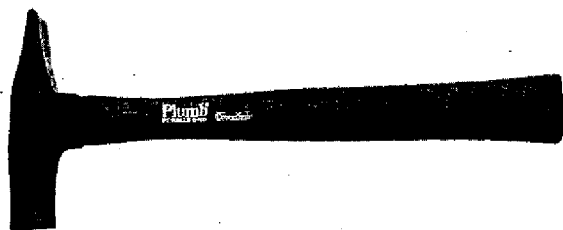
scald *Invertebrate Zoology*. a sense organ that contains ciliary receptors and sensory bristles.

scaling *Mechanics*. the expression of each variable and differential element in an equation in nondimensional form by dividing it by a characteristic value of the variable for the problem at hand. By setting these ratios to unity, the relative typical magnitudes of the terms may be directly compared, and those of small magnitude may be dropped for computational convenience but should be validated afterward. Also, NONDIMENSIONALIZING. *Mathematics*. the process of converting a quantity from one notation to another. *Electronics*. 1. the process of counting pulses with a scaler; used when pulses arrive faster than conventional counting methods can handle. 2. a method for converting the coefficient of a circuit so that it corresponds to its input-signal terminals. *Computer Science*. a process by which problem variables are related to machine variables in a computer. *Graphic Arts*. the process of calculating the printed size of a reproduction as a percentage of the original copy by any of several methods. *Geology*. see EXPOLIATION.

scaling circuit see SCALER.

scaling factor *Electronics*. the ratio of input pulses to output pulse needed by a scaler. Also, scaling ratio. *Engineering*. a factor used in heat-exchange measurements that allows for loss of heat conductivity of a material due to surface scales. *Physics*. a proportionality constant in some linear scaling relationships.

scaling hammer *Mechanical Devices*. a hammer having a keen edge and a ball or straight and cross panes, used to chip scale from steam boilers. Also, BOILERMAKER'S HAMMER.



scaling hammer

scaling law *Physics*. a relationship of direct proportionality or linearity between two quantities.

scaling ratio *Engineering*. the ratio of a certain property of a laboratory model to the same property in the natural prototype.

scaling symmetry *Mathematics*. a symmetry of a mathematical object consisting of multiplying existing variables by fixed functions of a single scalar. For example, the partial differential equation $\partial^2 u / \partial x^2 = \partial u / \partial t$ remains invariant when x is replaced by αx and t is replaced by $\alpha^2 t$.

scallion [skā'yōn] *Botany*. 1. a young (green) onion that has not formed a large bulb; used in salads. 2. see SHALLOT. 3. see LEEK.

scallop [skāl'əp; skāl'əp] *Invertebrate Zoology*. the popular name for various marine bivalve mollusks of the family Pectinidae that are valued as food; their shell has a distinctive arrangement of raised ribs radiating in a fanlike pattern; they swim by flapping the two valves of their shells together to produce a jet of water. Common North American species are the bay scallop, *Argopecten irradians*, and the sea (deep-sea) scallop, *Placopecten magellanicus*. *Geology*. 1. see FLUTE. 2. see SCALLOPING.

scaloped upland *Geology*. the area of land near or at the divide of an upland, into which glacial cirques have intruded from opposite sides.

scalloping *Geology*. a sedimentary structure having the appearance of an oscillation ripple mark whose concave side is always oriented toward the top of the bed. *Psychology*. the wavy, scalloped response curve caused by fixed-interval reinforcement schedules, where the subject's response rate lessens notably after reinforcement, then increases sharply just before the next reinforcement is scheduled to occur. *Navigation*. in certain navigational systems, an irregularity in the field pattern of the ground station caused by reflection from obstructions or terrain features; it creates cyclical variations in bearing error during flight.

scalp *Anatomy*. the part of the skin of the head, other than the face or ears, that normally is covered with hair. *Agronomy*. to create a furrow slice in an area of existing vegetation, usually so that a new plant species can be introduced. *Metallurgy*. to remove a surface layer from a billet or ingot. Thus, scalped billet, scalped extrusion ingot. *Mining Engineering*. 1. to remove oversize lumps from a stream of bulk material. 2. to remove large pieces of mine waste from run-of-mine coal on its way to a preparation plant.

scalpel *Surgery*. a small surgical knife having a straight handle and usually a blade with a convex edge. *Mechanical Devices*. a knife having a sharp, thin, usually detachable blade.

Scalpel *Ordnance*. a Soviet intercontinental ballistic missile propelled by a solid-rocket motor and carrying a 10-megaton warhead; officially designated SS-24.

Scalpellidae *Invertebrate Zoology*. a family of stalked barnacles in the class Cirripedia having peduncles covered with calcareous plates or scales.

scalpellum *Invertebrate Zoology*. the piercing mouthpart of true bugs and blood-sucking dipteran flies.

scaly ant eater see PANGOLIN.

scaly leg *Veterinary Medicine*. a condition of poultry and pet birds caused by burrowing mites and characterized by the formation of rough, hard, irregular scales on the feet and legs.

Scamp *Ordnance*. a Soviet mobile intermediate-range ballistic missile system firing the Scapegoat missile.

scan *Electronics*. to sweep over a specified range, field, or dimension. *Telecommunications*. 1. the process by which a FAX or television system analyzes or reproduces an image in a signal-line element. 2. to determine the availability of a communication or data channel. 3. a control in a radio that searches for each audible frequency in sequence, remaining tuned to each one for a few seconds before proceeding to the next. *Computer Technology*. 1. to examine sequentially each item in a list, each record in a file, each point of a display, or each input or output channel of a communication link. 2. a procedure for listing each node in a tree data structure. 3. the process of reproducing an image from a document onto a display screen. *Medicine*. 1. to use sensing equipment to gather information about or map a body region. 2. a compilation of the data gathered by this process. 3. a visual representation of these data; e.g., a CAT scan.

scan converter *Electronics*. 1. a device that receives and converts radar images sent over telephone lines or narrow bandwidth radio circuits at an extremely fast rate, generally between three and ten kilohertz. 2. a tube that can store radar, television, and data displays for long periods of time.

scandent *Botany*. of or relating to the development of a climbing growth habit; climbing.

scandia see SCANDIUM OXIDE.

Scandinavia *Geography*. a peninsula in northwestern Europe occupied by Norway and Sweden. Also, Scandinavian Peninsula.

scandium *Chemistry*. a metallic element having the symbol Sc, the atomic number 21, an atomic weight of 44.96, a melting point of 1540°C, and a boiling point of about 2780°C; a rare-earth-like silvery-white metal with a pink tinge that is obtained from thortveite and used in the semiconductor field. (Named for Scandia or Scandinavia, the source of the ore in which it was first identified.)

scandium chloride *Inorganic Chemistry*. ScCl_3 , colorless crystals that are very soluble in water; melts at 939°C and sublimes at 800–850°C.