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 **IEEE**
IEEE PRESS

 **WILEY-
INTERSCIENCE**

A JOHN WILEY & SONS, INC., PUBLICATION

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Published by John Wiley & Sons, Inc., Hoboken, New Jersey.
Published simultaneously in Canada.

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Library of Congress Cataloging-in-Publication Data is available.

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Wiley Electrical and Electronics Engineering Dictionary

ISBN 0-471-40224-9

Printed in the United States of America.

10 9 8 7 6 5 4 3 2 1

thin client Within a client/server architecture, a client which performs little data processing, allowing the use of less powerful computers at the front end. This contrasts with a **fat client**, where the client performs most or all of the processing. This also contrasts with **thin server**.

Thin Ethernet Same as **ThinNet**.

thin film 1. A technology utilized to apply upon a substrate a film which is less than ten micrometers in thickness, although the thickness may be less than 0.1 micrometer. Thin-film technology is usually employed to form active or passive circuit components and interconnections, using techniques such as sputtering or chemical-vapor deposition. Used, for instance, in the formation of ICs, to apply magnetic thin films, or in the preparation of organic semiconductors. This contrasts with **thick film** (1), which can involve thicknesses of greater than 100 micrometers. Also called **thin-film technology**. 2. A film applied utilizing **thin-film technology**.

thin-film capacitor A capacitor formed upon a substrate using **thin-film technology**.

thin-film circuit A circuit incorporating, or consisting exclusively of, **thin-film components**.

thin-film component A component, such as a transistor or resistor, formed upon a substrate using **thin-film technology**.

thin-film deposition The deposition of a **thin film** (1) upon a substrate, as accomplished, for instance via sputtering or chemical-vapor deposition.

thin-film heads Disk drive heads using minute coils which are deposited onto a thin film, and which convert the variations in magnetic flux of the rotating platter into data. Also called **thin-film inductive heads**.

thin-film inductive heads Same as **thin-film heads**.

thin-film material A material which is deposited upon a substrate using **thin-film technology**.

thin-film photovoltaic cell A photovoltaic cell which is formed upon a substrate using **thin-film technology**. Its abbreviation is **thin-film PV cell**.

thin-film PV cell Same as **thin-film photovoltaic cell**.

thin-film resistor A resistor formed upon a substrate using **thin-film technology**.

thin-film semiconductor A semiconductor formed upon a substrate using **thin-film technology**.

thin-film solar cell A solar cell which is formed upon a substrate using **thin-film technology**.

thin-film technology Same as **thin film** (1).

thin-film transistor A transistor formed upon a substrate using **thin-film technology**. Used, for instance, in LCD displays. Its abbreviation is **TFT**.

thin-film transistor LCD Abbreviation of **thin-film transistor liquid-crystal display**.

thin-film transistor liquid-crystal display A liquid-crystal display in which each pixel of the screen is powered separately and continuously by a transistor. This provides for a brighter image with higher contrast than a **passive-matrix display**. Its abbreviation is **thin-film transistor LCD**. Also known as **active-matrix display**, **active-matrix thin-film transistor display**, or **active display**.

thin magnetic film A very thin film, usually less than 10^{-6} meter, of a magnetic material deposited upon a substrate. In a hard disk, for instance, such a film may cover an aluminum platter, providing a medium suitable for data storage. Also called **magnetic thin film**.

thin quad flat-pack A square surface-mount chip which provides leads on all four sides, affording a high lead count in a small area. Such chips are generally thinner than other

quad flat-packs. Its abbreviation is **TQFP**. Also spelled **thin quad flatpack**. Also called **thin quad flat-package**.

thin quad flat-package Same as **thin quad flat-pack**.

thin quad flatpack Same as **thin quad flat-pack**.

thin server Within a client/server architecture, a server which performs little data processing. This contrasts with a **fat server**, where the server performs most or all of the processing. This also contrasts with **thin client**.

thin small outline package A surface-mounted chip or transistor package similar to a small-outline package, but thinner. Its abbreviation is **TSOP**.

ThinNet Abbreviation of **Thin Ethernet**. An Ethernet standard using a coaxial cable which is about 0.5 centimeter in diameter, as opposed to **ThickNet** whose cabling is about one centimeter in diameter. Also called **ThinWire**, **10Base5**, or **cheapernet**.

ThinWire Same as **ThinNet**.

thionyl chloride A yellow-red suffocating liquid whose chemical formula is SOCl_2 . Used, for instance, as an electrolyte in lithium cells.

third-generation computer A computer utilizing ICs. This computer generation started approximately in the mid 1960s.

third-generation language A high-level computer programming language, such as Pascal, BASIC, Java, or C++. Its abbreviation is **3GL**.

third-generation wireless Developed in the late 1990s and early 2000s, provides for digital cellular communications which are more flexible and provide a much wider bandwidth than that available with **second-generation wireless**, in addition to seamless global roaming. Its abbreviation is **3G**.

third law of thermodynamics A law stating that at absolute zero, the entropy of a perfect crystalline substance is zero.

third-level cache In computer systems with first-level and second-level cache built into the CPU, a type of cache which resides in the motherboard between CPU and main memory. Thus, L3 cache is the equivalent of L2 cache in systems which have only the L1 cache built into the CPU. Also called **L3 cache**, or **level 3 cache**.

third normal form In the normalization of a relational database, the third stage utilized to convert complex data structures into simpler relations. A database must first complete the second normal form before proceeding to the third. Its abbreviation is **3NF**.

third octave band A frequency band in which the ratio of the upper frequency limit to the lower frequency limit is equal to one third of an octave. The 1000 Hz one-third octave band, for instance, comprises frequencies ranging from about 891 Hz to 1122 Hz. Also called **third octave frequency band**, or **one-third octave band**.

third octave frequency band Same as **third octave band**.

third-order filter A filter with six components, such as three inductors and three capacitors, and which provides an 18 dB rolloff. Used, for instance, as a crossover network.

Thomson bridge A special bridge circuit whose arrangement minimizes the effects of contact resistance, enabling the accurate measurement of very low resistances. Some such devices can measure resistances of a few microhms. Also called **Kelvin bridge**, **Kelvin double bridge**, or **double bridge**.

Thomson effect Also called **Kelvin effect**. 1. When a current flows through a conductor whose ends are at different temperatures, heat is absorbed or generated, depending on the metal. 2. When there is a temperature differential between the ends of a conductor, an electromotive force is developed, the direction of which depends on the metal.