

Computer Desktop Encyclopedia

Ninth Edition

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mobile wireless Refers to transmission through the air from a base station to a moving device such as a carphone. Contrast with *fixed wireless*.

Mobitex See *BellSouth Intelligent Wireless Network*.

mobo Slang for motherboard.

mod See *modulo*.

modal Mode oriented. A modal operation switches from one mode to another. Contrast with *non-modal*.

modal bandwidth The capacity of an optical fiber measured in MHz-km (megahertz over one kilometer). One MHz-km equals approximately .7 to .8 Mbps. Thus, a 100 MHz-km fiber can carry about 70 to 80 Mbps of data.

modal dispersion See *dispersion*.

MO:DCA (Mixed Object:Document Content Architecture) An IBM compound document format for text and graphics elements in a document. It supports Revisable Documents, which are editable like revisable-form DCA; Presentation Documents, which provide specific output formatting similar to DCA final-form; and Resource Documents, which hold control information such as fonts.

Formats for specific objects are specified in OCAs (Object Content Architectures): PTOCA for Presentation and Text that has been formatted for output, GOCA for vector Graphics objects, IOCA for bitmapped Images and FOCA for Fonts. MO:DCA is implemented as IBM's AFP page description language.

mode (1) An operational state that a system has been switched to. It implies at least two possible conditions. There are countless modes for hardware and software. With regard to modes on a hard drive (Mode 2, Mode 3, etc.), see *IDE*. See *Real Mode*, *Protected Mode*, *burst mode*, *insert mode*, *supervisor state* and *program state*.

(2) In fiber optics, the reflective path taken by a light beam through the fiber. The mode is actually a standing wave that propagates down the fiber. In multimode fiber, several reflective paths (modes) are taken. See *multimode fiber* and *fiber optics glossary*.

model (1) A style or type of hardware device.

(2) A mathematical representation of a device or process used for analysis and planning. See *data model*, *data administration*, *financial planning system* and *scientific application*.

model-based expert system An expert system based on fundamental knowledge of the design and function of an object. Such systems are used to diagnose equipment problems, for example. Contrast with *rule-based expert system*.

modeling Simulating a condition or activity by performing a set of equations on a set of data. See *data model*, *data administration*, *financial planning system* and *scientific application*.

modem (MOdulator-DEModulator) A device that adapts a terminal or computer to an analog telephone line by converting digital pulses to audio frequencies and vice versa. The term usually refers to 56 Kbps modems (V.90), the current top speed, or to older 28.8 Kbps modems (V.34). The term may also refer to higher-speed cable or DSL modems or to ISDN terminal adapters, which are all digital and technically not modems. See *ISDN terminal adapter*.

A modem is an analog-to-digital and digital-to-analog converter. It also dials the line, answers the call and controls transmission speed. Modems have evolved at 300, 1,200, 2,400, 9,600, 14,400, 28,800, 33,300 and 56,000 bps. Whatever the top speed, some number of lower speeds are always supported so the modem can accommodate earlier modems or negotiate downward on noisy lines.

For hookup to a personal computer, an internal modem needs a free expansion slot, while an external modem requires a free serial port or USB port. The software required to drive a modem is included in the operating system. In Windows, the Dial-up Networking "Make New Connection" wizard takes you through setting up your modem to dial your Internet provider.