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dynamic stop = stop in a process where the system tells the user that some action must be taken before the processing will continue; **dynamic storage allocation** = to allocate memory to a program when it needs it rather than reserving a block before it has run; **dynamically redefinable character set** = computer or videotext character set that can be changed when required; **dynamic subroutine** = subroutine whose function must be defined each time it is called; *compare* STATIC; **dynamic update** = a display (such as a graph) updated in real time as new data arrives

dynamic data exchange (DDE)

noun (in Microsoft Windows and OS/2) method in which two active programs can

exchange data; one program asks the operating system to create a link between the two programs

dynamic link library (DLL) (in Microsoft Windows and OS/2) library of utility programs that can be called from a main program; *the word-processor calls a spell-check program that is stored as a DLL*

dynamic random access memory
see DRAM

DYUV = DELTA YUV digital video encoding technique in which luminance of a pixel is calculated by the RGB input signal ($Y = 0.6G + 0.3R + 0.1B$); from the value of Y it is possible to calculate the values of U and V as $UR = Y$; $VB = Y$

distribute *verb* (a) to send out data or information to users in a network or system; **distributed adaptive routing** = directing messages in a packet network switching system by an exchange of information between nodes; **distributed database system** = database system where the data is stored on several different computers but can be searched as if it is one single location; **distributed data processing (DDP)** = operations to derive information from data which is kept in different places; **distributed file system** = system that uses files stored in more than one location or backing store but are processed at a central point; **distributed intelligence** = decentralized system in which a number of small micros or mini-computers carry out a set of fixed tasks (rather than using one large computer); **distributed network** = network in which each node can operate as a server storing files or working as a print server; **distributed (data) processing** = system of processing in a large organization with many small computers at different workstations instead of one central computer; **distributed system** = computer system which uses more than one processor in different locations, all connected to a central computer

QUOTE:CORBA sets out a standard for how objects in applications, repositories or class libraries should make requests and receive responses across a distributed computing network.

Computing

distribution *noun* act of sending information out, especially via a network; **distribution network** = see LAN, WAN

dither *verb* to create a curve or line that looks smoother by adding shaded pixels beside the pixels that make up the image; **dithered colour** = colour that is made up of a pattern of different coloured pixels

divide *verb* (a) to divide a number by four = to find out how many fours can be contained in the other number; *twenty-one divided by three gives seven* (b) to cut or to split into parts; *in the hyphenation program, long words are automatically divided at the end of lines*

dividend *noun* operand that is divided by a divisor in a **division operation**

COMMENT: the dividend is divided by the divisor to form the quotient and a remainder

division *noun* act of dividing

divisor *noun* operand used to divide a dividend in a division operation

DLL = DYNAMIC LINK LIBRARY (in Microsoft Windows and OS/2) library of utility programs that can be called from a main program; *the word-processor calls a spell-check program that is stored as a DLL*; **DLL file** = file containing a library of routines that can be used by another program

DLP = DIGITAL LIGHT PROCESSING method of projecting an image using an electronic chip that contains thousands of tiny mirrors

DMA = DIRECT MEMORY ACCESS direct rapid link between a peripheral and a computer's main memory, which avoids accessing routines for each item of data read; **DMA controller** = interface IC that controls high-speed data transfer between a high-speed peripheral and main memory, usually the controller will also halt or cycle steal from the CPU; **DMA cycle stealing** = CPU allowing the DMA controller to send data over the bus during clock cycles when it performs internal or NOP instructions

QUOTE:A 32-bit DMA controller, 16-bit video I/O ports and I/O filters complete the chip.

Computing

DML = DATA MANIPULATION LANGUAGE

DMT = DISCRETE MULTI-TONE technology that uses digital signal processors to create sound signals that carry digital video, sound, image and data over cable at high speed

DNS = DOMAIN NAME SYSTEM distributed database used in an Internet system to map names to addresses, for example you can use the name 'www.pcp.co.uk' to locate the Peter Collin Publishing website rather than a complex network address (called the IP address)

dock *verb* to connect a laptop computer to a special docking station on a desk to give it

inquiry *noun* (i) asking a question; (ii) accessing data held in a computer system; **inquiry character (ENQ)** = code transmitted by a computer to a remote terminal, asking for a response; **inquiry station** = terminal that is used to access and interrogate files stored on a remote computer; **inquiry/response** = interactive computer mode, in which a user's commands and enquiries are responded to very quickly

Ins or insert key *noun* key that switches a word-processor or editor program into insert mode rather than overwrite mode

insert *verb* (a) to put something into something; *first insert the system disk in the left slot* (b) to add new text inside a word or sentence; **insert key** or **Ins key** = key that switches a word-processor or editor program into insert mode rather than overwrite mode; **inserted subroutine** = series of instructions that are copied directly into the main program where a call instruction appears or where a user requires

insert mode *noun* interactive computer mode used for editing and correcting documents

COMMENT: this is a standard feature on most word-processing packages where the cursor is placed at the required point in the document and any characters typed will be added, with the existing text moving on as necessary

insertion loss *noun* attenuation to a signal caused by adding a device into an existing channel or circuit

insertion point *noun* cursor positioned to show where any text typed in will be entered within a document

install *verb* to put a machine into an office or factory; to set up a new computer system to the user's requirements or to configure a new program to the existing system capabilities; *the system is easy to install and simple to use*; **install program** = software utility that transfers program code from the distribution disks onto a computer's hard disk and configures the program

installable device driver *noun* device driver that is loaded into memory and remains resident, replacing a similar function built-into the operating system

installation *noun* (a) computer and equipment used for one type of work and processing; *the engineers are still testing the new installation* (b) setting up a new computer system; *the installation of the equipment took only a few hours*

instance *noun* (in object-oriented programming) an object or duplicate object that has been created

instant jump *noun* (in a videodisc player) hardware feature that allows the player to skip a number of frames (up to 200) in the time it takes to refresh the screen

instant messaging *noun* software that allows a user to type in and exchange messages with one or more other people connected to the Internet; each person runs special software that indicated when a friend or colleague has connected to the Internet and is available to receive messages, unlike email, the recipient sees the message as it is typed in

instantaneous access *noun* extremely short access time to a random access device

instruct *verb* to tell someone or a computer what to do

instruction *noun* word used in a programming language that is understood by the computer to represent an action; *the instruction PRINT is used in this BASIC dialect as an operand to display the following data*; **instruction address** = location of an instruction; **instruction address register (IAR)** register in a CPU that contains the location of the next instruction to be processed; **instruction area** = section of memory that is used to store instructions; **instruction cache** = area of high-speed memory which stores the next few instructions to be executed by a processor; **instruction character** = special character that provides a control sequence rather than an alphanumeric character; **instruction codes** = set of symbols or codes that a CPU can directly understand and execute; **instruction counter** or **instruction address register (IAR)** or **program counter** = register in a CPU that contains the location of the next instruction to be processed; **instruction cycle** = sequence of events and their timing that is involved when fetching and executing an instruction stored in memory; **instruction cycle time** =

left justify *verb* printing command that makes the left hand margin of the text even

left shift *noun* left arithmetic shift by one bit of data in a word; a binary number is doubled for each left shift

left-handed mouse *noun* configuration of a mouse so that the function of the two buttons are reversed

leg *noun* one possible path through a routine

legacy *noun* older technology or a previous version of software or hardware that is still supported in new developments to allow existing applications and hardware to still be used

legal *adjective* statement or instruction that is acceptable within language syntax rules

length *noun* how long something is; the number of data items in a variable *or* list; **block length** = number of records *or* fields *or* characters in a block of data; **buffer length** = number of data item that can be stored in a buffer while waiting for the processor to attend to them; **field length** = number of characters stored in a field; **file length** = number of characters *or* bytes in a stored file; **length of filename** = number of characters allowed for identification of a file; **line length** = number of characters which can be displayed horizontally on one line of a display (CRT displays often use an 80 character line length); **record length** = total number of characters contained in the various fields within a stored record; **register length** = number of bits that make up a register

letter *noun* piece of writing sent from one person to another *or* from a company to another, to give information, to send an instructions, etc.; **form letter** *or* **standard letter** = letter sent to several addressees by name without any change to the text

letter-quality (LQ) printing *noun* feature of some dot-matrix printers to provide characters of the same quality as a typewriter by using dots which are very close together; **near-letter-quality (NLQ) printing** = printing by a dot-matrix printer that provides higher quality type, which is almost as good as a typewriter, by decreasing the space between the dots

QUOTE:the printer offers reasonable speeds of printing

in both draft and letter-quality modes

Which PC?

level *noun* quantity of bits that make up a digital transmitted signal; **Level A** = ADPCM audio quality level with a 20KHz bandwidth, 38.7KHz sample rate and 8bit samples; **Level B** = ADPCM audio quality level with a 17KHz bandwidth, 38.7KHz sample rate and 8bit samples; **Level C** = ADPCM audio quality level with an 8.5KHz bandwidth, 18.9KHz sample rate and 4-bit samples; **level one cache** *or* **L1 cache** = small area of high-speed static RAM fitted to a processor chip that stores frequently used data to improve processing speed; *the Intel Pentium processor contains 16Kb of L1 cache*; **level two cache** *or* **L2 cache** = high-speed cache memory that is fitted to the computer's motherboard, except on a computer using the Pentium Pro processor where the memory is part of the processor chip design; **quaternary level quantization** = use of four bits of data in an A/D conversion process

lexical analysis *noun* stage in program translation when the compiling *or* translating software replaces program keywords with machine code instructions

LF = LINE FEED

library *noun* (a) collection of files *or* documents *or* books *or* records, etc., which can be consulted *or* borrowed by the public, usually kept in a public place (b) **program library** *or* **software library** = collection of programs *or* books belonging to a person; *he has a large library of computer games* (c) **library function** = software routine that a user can insert into his program to provide the function with no effort; **library program** = (i) number of specially written *or* relevant software routines, which a user can insert into his own program, saving time and effort; (ii) group of functions which a computer needs to refer to often, but which are not stored in main memory; *the square root function is already in the library program*; **library routine** = prewritten routine that can be inserted into a main program and called up when required; **library subroutine** = tried and tested subroutine stored in a library, and which can be inserted into a user's program when

required; **library track** = one track on a magnetic disk *or* tape used to store information about the contents (such as titles, format and index data); **macro library** = number of useful, independent routines that can be incorporated into any program to ease program writing

QUOTE: a library of popular shapes and images is supplied
Practical Computing

licence *noun* permission given by one manufacturer to another manufacturer to make copies of his products against payment of a fee; *the software is manufactured in this country under licence*; **licence agreement** = legal document that accompanies any commercial software product and defines how you can use the software and, importantly, how many people can use the software. Unless you buy a network version of a software product, the licence allows one person to use the software - copying the software is illegal. If you want several people to use the software or if you want to use the software on a network, then you need to buy a multi-user licence.

lifetime *noun* period of time during which a device is useful *or* not outdated; *this new computer has a four-year lifetime*

LIFO = LAST IN FIRST OUT queue system that reads the last item stored, first; *this computer stack uses a LIFO data retrieval method*; *see also* FIFO

lifter *noun* mechanical device that lifts magnetic tape away from the heads when rewinding the tape

light *noun* perception of brightness due to electromagnetic effects in the frequency range 400 - 750 nm, which allows a person to see; *the VDU should not be placed under a bright light*; **light emitting diode (LED)** = semiconductor diode that emits light when a current is applied (used in calculators and clock displays and as indicators); **light pen** = computer accessory in the shape of a pen that contains a light-sensitive device that can detect pixels on a video screen (often used with suitable software to draw graphics on a screen *or* position a cursor)

lighting formula *noun* mathematical formula that describes the effect of a light

source on an object or scene; the formula is used to calculate the position of the highlights and shadows as the position of the light source is moved around the scene; *see also* SHADING

lightweight *adjective* which is not heavy; *a lightweight computer which can easily fit into a suitcase*

LIM EMS = LOTUS, INTEL, MICROSOFT EXPANDED MEMORY SYSTEM (in an IBM PC) standard that defines extra memory added above the 640Kb limit of conventional memory; this memory can only be used by specially-written programs

limited distance modem *noun* data transmission device with a very short range that sends pure digital data rather than data sent on a modulated carrier

limiter *noun* device that removes the part of an input signal that is greater than or less than a predefined limit; used with audio and video signals to prevent overloading an amplifier

limits *noun* predefined maximum ranges for numbers in a computer

line *noun* (a) physical connection for data transmission (such as a cable between parts of a system *or* a telephone wire); **access line** = permanently connected communications line between a terminal and a DSE; **fast line** = special communications link that allows data to be transmitted at 48K *or* 96K baud; **line adapter** = electronic circuit that matches the correct signal voltage and impedance for a particular line; **line analyzer** = test equipment that displays the characteristics of a line *or* the signals carried on the line; **line busy tone** = signal generated to indicate that a connection *or* telephone line is already in use; **line communications** = signal transmission using a cable link *or* telegraph wire; **line conditioning** = (techniques) used to keep the quality of data transmissions *or* signals on a line to a certain standard; **line control** = special codes used to control a communications channel; **line driver** = high power circuit and amplifier used to send signals over a long distance line without too much loss of signal; **line in** = input connection to audio equipment, such as an amplifier, that accepts a low voltage audio signal; **line level** = amplitude of a