

APPENDIX A

GLOSSARY OF TERMS

4GL - SEE FOURTH GENERATION LANGUAGE.

ALGORITHM

A set of clearly presented instructions, which describe the steps, followed to carry out an activity or procedure such as solving a problem.

ANALOGUE

Relating to a continuously varying quantity. (See also **DIGITAL**.)

APPLICATION SOFTWARE

Software for carrying out a general function or solving problems, e.g. word-processing software. (See also **SYSTEMS SOFTWARE**.)

ASSEMBLER

A program which translates assembly language into machine code.

ASSEMBLY LANGUAGE

A low-level language where machine code instructions in binary form are replaced by mnemonic (symbolic) code for each instruction.

BACKUP COPY

A duplicate of electronic files (programs, data or operating system). It is available in place of the original in case of corruption / loss / availability problems often stored in remote locations.

BAR CODE

A coding consisting of a sequence of vertical lines of different thicknesses and spacings used in shops, libraries, etc., to enable automatic pricing of goods, recording of bulk loans, etc. The lines can be read into the computer using a light source.

BAR CODE READER

An input device used to scan **BAR CODES** using optical sensing techniques.

BAUD RATE

An old measure of the speed of data communications, replaced with the more accurate bps (bits per second).

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BINARY/BITS

The smallest unit of information (corresponding to '0' or '1', 'on' or 'off'). Computers store information as a series of bits. Abbreviation of **binary digit**.

BITMAP

A grid of dots which are used to display information. VDU's, digital cameras, scanners operate in this way.

BUFFER (EXTERNAL)

Devices to isolate two parts of a circuit or system, or a temporary store between two devices, e.g. printer buffer.

BUS

A number of parallel pathways connecting components of a computer system. These allow signals to run in parallel giving rise to 8 bit, 16 bit, 32 bit etc. busses.

BYTE

A group of eight bits. The storage capacity of computers (ROM and RAM) and associated media is given in bytes. Approximately one byte is required to store one character.

CD ROM (COMPACT DISKS)

A disk that has pits and lands on a reflective surface. A laser beam scans these to produce a digital signal.

CENTRAL PROCESSING UNIT (CPU)

That part of the computer that decodes instructions and controls the hardware (electronic circuits) used to execute them. It consists of the control unit, arithmetic unit, program counter and register.

COMPILER

A program which translates high level language into machine code.

COMPILATION

Conversion of a program written in high level language into a set of binary instructions for execution by the computer.

COMPUTER AIDED DESIGN (CAD)

The use of computers to aid design/drafting

CONTINUOUS STATIONERY

Fan-folded paper (sometimes multipart) divided into pages by perforations. It is usually used with line and impact dot matrix printers. Used extensively to produce multicopy output.

CONCEPT KEYBOARD

A plastic film keyboard where each key (division) can be defined by the user. Often used in bars and restaurants to price drink and food.

CONTROLLER CARDS

Electronic units which plug into the main processing unit. They provide for communication to peripheral devices, such as speakers, networks, VDU's.

CORRUPTION

The inadvertent or intentional destruction or alteration of stored data.

CURSOR

A movable mark on screen which shows where the next character or other input will be displayed.

DATA

General term denoting any or all facts, numbers, letters and symbols. Information is data in a structure, eg table or sentence.

DATABASE

A body of information held within a computer system using the facilities of a database management system. All accessing, updating and retrieval will be via the facilities provided by the software. Databases can also be stored manually.

DATA PAD

An input device for a computer usually consisting of numeric keys only, eg bank account numbers/details.

DEBUGGING

Process of eliminating hardware and software errors in a system.

DEFAULT

A system or program provided value or option that is used automatically unless an alternative is specified.

DIGITAL

Having only discrete – on and off states. The representation of data or physical quantities by digital signals. (see also **ANALOGUE**.)

DIRECTORY (FOLDER)

A location in a hierarchical storage structure, the location may hold files and more hierarchical sub locations.

DISK / DISKETTE

A small magnetic or optical disk used to store data.

DISK DRIVE

A device that enables data to be written to and retrieved from disks.

DOCUMENT

Normally refers to a printed copy of information but could be used to refer to the electronic file of the information.

DOT MATRIX PRINTER

A printer which prints characters and graphics from a matrix of dots. These may be impact where dots are formed by pins hitting a ribbon, or non-impact where the dots are formed from ink sprayed onto paper or by laser jet static.

DRIVER

A software program which converts electronic data into control operations for output devices such as printers and vice versa for input devices.

EDIT

To examine displayed data and make changes and revisions involving substitution, deletion or insertion.

E- MAIL

Messages or other information exchanged between users of computer systems via electronic communications.

FACSIMILE (FAX)

A system of document transmission and reception, using synchronised scanning at the transmitter and receiver.

FAX - SEE FACSIMILE.

FIELD (DATABASE)

One element of a database record structure. An area reserved for one element of a database record structure. An area reserved for recording one part of a record. Could be used to refer to one part of the record itself.

FILE (COMPUTER)

A named set of stored data. The data may be a program or information created by a user such as a word processed document.

FLAT SCREEN

A type of display device where the depth is much less than that needed for a conventional cathode ray tube. Often an LCO or plasma display.

FLOPPY DISK

A thin flexible and portable plastic disk coated with magnetic medium and used for data storage.

FOLDER – SEE DIRECTORY

FONT

The specific style and design of a set of letters, numbers, punctuation marks, and symbols that may be displayed or printed.

FORMAT

The layout or arrangement of text or data on a page or a screen. Also the specific layout of tracks and sectors on a magnetic disk.

FOURTH GENERATION LANGUAGE (4GL)

High level languages which make use of the computer to generate some of the code. Sometimes called program application generators.

GIGABYTE

Gigabyte 1,073,741,824 Bytes (2^{30} Bytes).

HARDCOPY

Sheet or sheets of paper on which data is represented in human readable form.

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HARD DISK

A rigid magnetic **DISK** that is usually fixed inside the machine used for secondary storage. Also known as a fixed disk.

HARDWARE (COMPUTER)

The physical components of computer system.

HIGH LEVEL LANGUAGE

A programming language with syntax similar to English which is relatively machine independent.

INDENTATION

The positioning of text, relative to the right or left of the left margin.

INFORMATION

Data in an appropriate structure, such as tables or sentences.

INK JET

A printer, which uses a dot matrix method of printing where the matrix is formed from fine ink droplets.

INPUT DEVICE

A unit of **HARDWARE** from which data is transmitted to the computer.

INTERFACE

Generally the connecting link between devices or systems. It converts the signal or data format used by one device into a form suitable for another device.

INTEGRATED (SOFTWARE)

Several different types of application software which enable data exchange between each application and a common tool and menu structure to make them easy to learn.

INTERNET

The interconnection of many computer systems using a wide area network. The systems provide for e-mail, file transfer, discussion groups, the World Wide Web and live audio and visual communications.

INTRANET

A closed and private network that operates in the same way as the Internet.

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INTERPRETER

A language translator which translates and executes the source code one statement at a time.

JOYSTICK

A device for generating signals that can cause the cursor or some other symbol to be moved rapidly about on a display screen.

JUSTIFICATION (FULL)

To **FORMAT** text so that lines are equal length with straight left and right margins. Spaces between words are enlarged so that text characters always touch both left and right margins.

KEYBOARD

An input device formed of small keys which are usually depressed by the fingers. Each key inputs a specific character or number.

KILOBYTE

Kilobyte 1024 Bytes (2^{10} Bytes)

LASER PRINTER

A dot matrix method of printing using electrostatic copier techniques. High to very high resolutions of between 300 to 2400 dots per inch.

LIGHT PEN

A hand-held light sensitive stylus that detects light from the screen of most visual display units (VDUs). It enables operators to enter data by pointing at items displayed on the screen.

LIQUID CRYSTAL DISPLAY (LCD)

An output device that reflects light, e.g. the display used in pocket calculators and portable computers. Cannot be seen in the dark unless it has a backlight.

LOCAL AREA NETWORK (LAN)

A computer network restricted to a limited geographical area, often one building.

MACHINE CODE

Binary code that is directly understood and can be processed by the **CENTRAL PROCESSING UNIT (CPU)**.

MAGNETIC INK CHARACTER RECOGNITION (MICR)

An input device which permits recognition of stylised characters printed in magnetic ink.

MAGNETIC MEDIA

Media with a surface layer of magnetic material which is used for data storage.

MAGNETIC READER

An input device that reads magnetic strips on plastic cards. The cards are often used for bank machines, security access and on credit cards.

MAINFRAME COMPUTER

A large general purpose computer with extensive processing, storage and input/output capabilities.

MAIN PROCESSING UNIT

The main processing box of a desk top computer. It contains the motherboard, the CPU, memory, storage devices, controller cards, the power supply, interconnecting buses and cables and ports for connecting peripheral devices.

MARK SENSE READER – SEE OPTICAL MARK READER

MEGABYTE

Megabyte 1 048 576 bytes (2^{20} Bytes).

MEMORY

The part of a computer that receives data in the form of binary digits and stores it electronically for future use. Commonly Read Only Memory or Random Access Memory.

MICR - SEE MAGNETIC INK CHARACTER RECOGNITION.

MICROPROCESSOR

A **CENTRAL PROCESSING UNIT** contained on a single integrated circuit.

MODEM

A device for converting computer data from digital to analogue form (and vice versa) to enable transmission of the data along analogue telephone lines. (Abbreviation from **modulator/demodulator**).

MOUSE – SEE POINTER DEVICE

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NETWORK (COMPUTER)

Systems connected together to enable communication between them.

OCR - SEE OPTICAL CHARACTER RECOGNITION.

OFF-LINE

The state of a peripheral when not connected to or not communicating with a computer system.

OMR - SEE OPTICAL MARK READER.

ON-LINE

The state of a peripheral when connected to and controlled by a computer system.

OPERATING SYSTEM (SOFTWARE)

A set of programs, which control the operation of a computer and its peripherals enabling other forms of software to be executed. It is usually partly held on **ROM** and partly on magnetic or optical disk storage.

OPTICAL CHARACTER RECOGNITION (OCR)

Software which scans a bit map picture or text and recognises the characters. It converts the picture or text into a text file. This can be used by text processing applications software.

OPTICAL MARK READER (OMR)

An input device which reads marks made in pencil or pen in predetermined positions on special forms or cards.

OUTPUT DEVICE

A unit of **HARDWARE** to which data can be transmitted from a computer eg a printer.

OVERWRITE

A method of entering text such that it destroys previously entered text. Used for correction of text by typing over the top of incorrect characters. (Also known as overtype.)

PADDLE

A handheld control device (input) usually moves in two dimensions – often used in games. Inputs data to the computer.

PARALLEL TRANSMISSION

The simultaneous transmission, using eight wires, of all the bits of an encoded character. Faster than **SERIAL TRANSMISSION**.

PERIPHERAL

Any external device that is connected to a computer.

PIXEL

The smallest addressable point of a **VDU**. One pixel is one of the dots forming the dot matrix of a **VDU**.

PLOTTER

An output device which draws lines on paper using a pen.

POINT

A unit of measuring typeface approximately 72 points = 1"

POINTER DEVICE

An input device which is moved by the hand. When connected to a computer, movement is sensed, thus allowing the input of data at any point on the screen.

POINT OF SALE (POS) TERMINAL

An input device used at sales desks to automatically record items sold to determine the cost of purchases, print a detailed customer receipt and transmit details to the stock control database. Usually using a bar code system.

PORT

The external connection point on the main processing unit of a computer, to which peripheral devices are connected to communicate with the computer or microprocessor based system.

PORTABLE

A computer that may be battery powered. Usually about the size of a sheet of A4 paper and has a **FLAT SCREEN** display.

PRESENTATION (SOFTWARE)

Software which is designed to allow presentation of business plans, advertising etc. In the form of slides (video).

PRIMARY STORAGE – SEE RAM

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PRINTER

An output device producing hard copy eg characters or graphs on paper.

PRINTER BUFFER

The memory storage capacity of a printer. A large storage capacity improves the speed at which a printer accepts information from the computer.

PROGRAM

An ordered list of instructions to the computer to perform a given task.

PROGRAMMING

Writing a **PROGRAM**.

RAM SEE RANDOM ACCESS MEMORY.

RANDOM ACCESS MEMORY (RAM)

Read and write computer memory use to store temporary data. RAM is volatile, its contents are lost when power is removed.

READ ONLY MEMORY (ROM)

Memory that is operationally non volatile and can be read repeatedly but cannot be changed. ROM's are manufactured with the data in them. There are some types of ROMs where data can be changed using a specialised process eg, EEPROM.

RECORD

A collection of related data treated as a unit, e.g. a candidate record comprises: name, address, date of birth etc. Each separate item of data forming the record is known as a **FIELD**.

RESOLUTION

The level of detail visible in any form of display or copy. Most computer output devices produce images using a dot matrix of small dots. Resolution depends on the number of dots per inch. For example, 500 dpi is high (good) resolution and 25 dpi (poor) resolution. Dots on a **VISUAL DISPLAY UNIT** are known as **PIXELS**.

RETRIEVE

The transfer of data, stored on magnetic media or CD ROM, to random access memory (RAM) so that editing or other processing can be performed.

ROM SEE READ ONLY MEMORY.

RUN TIME SYSTEMS

Software which enables execution of object program

SCANNER

An input device that scans hand written or printed documents and converts them to a dot matrix graphic of the original.

SCROLL

The movement of information up, down or across the screen of a **VISUAL DISPLAY UNIT (VDU)** so that the operator can view areas of text adjacent to that displayed on the screen.

SECONDARY STORAGE

A unit of hardware which provides the means to store and retrieve data from storage media.

SERIAL TRANSMISSION

The transmission of data on a single wire. The eight bits of each character are sent in sequence down the single wire. Slower than **PARALLEL TRANSMISSION**.

SOFTWARE

The programs (set of instructions) which are used to direct the operations of a computer.

SPEECH INPUT

The computer recognises sound input via a microphone and translates this into text or commands.

SPEECH OUTPUT

This is textual output in the form of speech.

SPREADSHEET

A program that manipulates tables consisting of rows and columns of cells and displays them on a screen. The cells contain numerical information and formulas, or text. The value in a numerical cell is either typed in or calculated from a formula. Spreadsheets can be used for storing and amending accounts, 'what if' financial projections, and many other applications involving tables of numbers with interdependent rows and columns.

STORAGE

The use of electronic (RAM, ROM), magnetic (diskette, hard disk) or optical (CD Rom, CDRW, DVD) devices to store data.

SUITE – SEE INTEGRATED (SOFTWARE)

TAB

A control character used when laying out text to adjust the position where the next text character will appear in a line of text.

TAPE, MAGNETIC

Often used for backing up data on computer systems.

TERABYTE

Terabyte 1 099 511 627 776 Bytes (2^{40} Bytes)

TERMINAL

A device used only in on-line mode for communicating with central computer system. Often comprises a **VISUAL DISPLAY UNIT (VDU)** and keyboard.

THERMAL (PRINTER)

A type of printer in which the image is produced by localised heating of paper or melting of plastic ink. A thermal transfer printer is one in which thermoplastic ink is transferred to paper by localised heating.

TOUCH SENSITIVE SCREEN

A pressure sensitive transparent film laid over the VDU screen which outputs X, Y grid co-ordinates for the point under pressure and enables positional data inputs to the computer.

VIDEOCONFERENCING

A method of communicating via computer using video and sound.

VISUAL DISPLAY UNIT (VDU)

A device which displays, on a screen, electronic data in the form of text or graphics. A cathode ray tube (CRT) or **FLAT SCREEN** is used as the display device.

WIDE AREA NETWORK (WAN)

A computer network where the remote systems are connected to each other by communications link and covering two or more sites usually over a wide geographical area.

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WORD

A set of binary digits that occupies one storage location in memory and is treated by a computer as a unit. A word can be one or more bytes. The size of a word is also used to define the computer system e.g. 8-bit , 16-bit, 32-bit, 64-bit.

WORD-PROCESSING

The use of microelectronics equipment to assist in the preparation of textual documents.

WORLD WIDE WEB (WWW)

All the web sites connected to the Internet. They comprise web sites operated with web servers containing web pages written in html with applets written in Java, Active X, VRML etc. Not all web sites use the www prefix for their address.