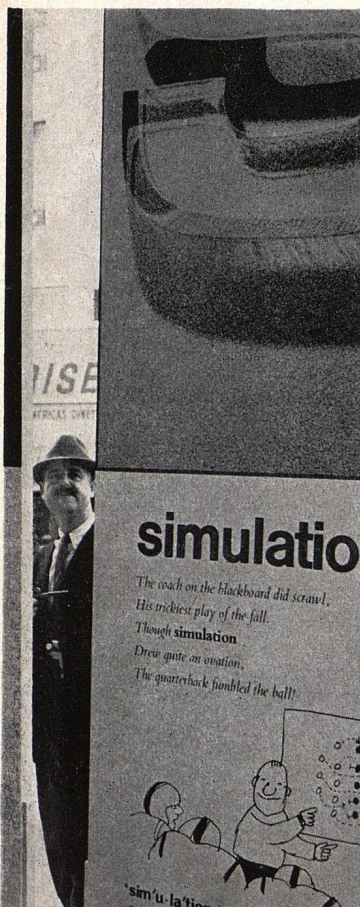


A GLOSSARY OF COMPUTER TERMS

To fathom the new technology, designers first need to acquaint themselves with its jargon—Here is a basic vocabulary

Not only designers, but the public at large is being encouraged to familiarize itself with computer terminology. Hence the recent "Some Computer ABCs" exhibit at IBM's Manhattan showroom. Passerby in picture below is seen viewing exhibit, which consisted of 25 posters (one for each letter of the alphabet, with "x" and "y" combined). Each poster showed a data processing term, the term's definition, plus a limerick meant to drive the definition across to the public. Robert L. Monahan, of IBM's Corporate Advertising Department, wrote the limericks and definitions; Martin Rosenzweig designed the typography and letter photographs; and Tomi Ungerer provided the delightful drawings which illustrated the limericks. Several of his drawings are shown on these pages.



Surprising as it seems, up until very recently there really was no definitive vocabulary of information processing --no collection of definitions that was universally and uniformly accepted. This situation was corrected when, just a few months ago, the United States of America Standards Institute issued its "USA Standard Vocabulary for Information Processing." Portions of this vocabulary are presented here; the terms listed are those which the editors feel graphic designers would be most likely to encounter.

Shown on these pages along with the vocabulary are delightful drawings by Tomi Ungerer, part of a series he did for a recent exhibition at the IBM showroom in Manhattan.

ABSOLUTE ADDRESS. (1) An Address that is permanently assigned by the machine designer to a storage location. (2) A pattern of characters that identifies a unique storage location without further modification. (3) Synonymous with Machine Address.

ACCESS TIME. (1) The time interval between the instant at which data are called for from a storage device and the instant delivery is completed, i.e., the read time. (2) The time interval between the instant at which data are requested to be stored and the instant at which storage is completed, i.e., the write time.

ADDRESS. (1) An identification, as represented by a name, label, or number, for a register, location in storage, or any other data source or destination such as the location of a station in a communication network. (2) Loosely, any part of an instruction that specifies the location of an operand for the instruction. (3) See Absolute Address, Base Address, Direct Address, Effective Address, Immediate Address, Indirect Address, Multi-Address, Multilevel Address, N-Level Address, Relative Address, Symbolic Address.

ADDRESS FORMAT. The arrangement of the address parts of an instruction. The expression "Plus-One" is frequently used to indicate that one of the

addresses specifies the location of the next instruction to be executed, such as one-plus-one, two-plus-one, three-plus-one, four-plus-one.

ADDRESS PART. A part of an instruction word that specifies the address of an operand.

ADDRESS REGISTER. A register in which an address is stored.

ALGOL (ALGORITHMIC ORIENTED LANGUAGE). An international procedure-oriented language.

ALGORITHM. A prescribed set of well-defined rules or processes for the solution of a problem in a finite number of steps, e.g., a full statement of an arithmetic procedure for evaluating sine x to a stated precision. Contrast with Heuristic.

ALPHANUMERIC. Pertaining to a character set that contains both letters and numerals, and usually other characters. Synonymous with Alphameric.

ANALOG. Pertaining to data in the form of continuously variable physical quantities. Contrast with Digital.

ANALOG COMPUTER. A computer that operates on analog data by performing physical processes on these data. Contrast with Digital Computer.

ARGUMENT. An independent variable, e.g., in looking up a quantity in a table, the number, or any of the numbers, that identifies the location of the desired value.

ARITHMETIC UNIT. The unit of a computing system that contains the circuits that perform arithmetic operations.

ARTIFICIAL INTELLIGENCE. The capability of a device to perform functions that are normally associated with human intelligence, such as reasoning, learning, and self improvement.

ARTIFICIAL LANGUAGE. A language based on a set of prescribed rules that are established prior to its usage. Contrast with Natural Language.

ASSEMBLE. To prepare a machine language program from a symbolic language program by substituting absolute operation codes for symbolic operation codes and absolute or relocatable addresses for symbolic addresses.

ASSOCIATIVE STORAGE. A storage de-

vice in which storage locations are identified by their contents, not by names or positions. Synonymous with Content Addressed Storage, Parallel Search Storage.

AUXILIARY STORAGE. A storage that supplements another storage.

BAND. A group of circular recording tracks on a storage device such as a drum or disc.

BASE ADDRESS. A given address from which an absolute address is derived by combination with a relative address.

BINARY. (1) Pertaining to a characteristic or property involving a selection, choice, or condition in which there are two possibilities. (2) Pertaining to the numeration system with a radix of two. (3) See Column Binary, Row Binary.

BINARY CELL. A storage cell of one binary digit capacity, e.g., a single bit register.

BINARY CODE. (1) A code that makes use of exactly two distinct characters, usually 0 and 1.

BINARY CODED DECIMAL. Pertaining to a decimal notation in which the individual decimal digits are each represented by a group of binary digits, e.g., in the 8-4-2-1 binary coded decimal notation, the number twenty-three is represented as 0010 0011 whereas in binary notation, twenty-three is represented as 10111.

BINARY DIGIT. (1) A character used to represent one of the two digits in the numeration system with a radix of two. Abbreviated "Bit." (2) See Equivalent Binary Digits.

BINARY SEARCH. A search in which a set of items is divided into two parts, one part is rejected, and the process is repeated on the accepted part until those items with the desired property are found: Synonymous with Dichotomizing Search.

BIT. (1) A binary digit. (2) See Check Bit, Parity Bit.

BLOCK DIAGRAM. A diagram of a system, instrument, computer, or program in which selected portions are represented by annotated boxes and interconnecting lines.

BOOTSTRAP. A technique or device designed to bring itself into a desired

state by means of its own action, e.g., a machine routine whose first few instructions are sufficient to bring the rest of itself into the computer from an input device.

BRANCH. (1) A set of instructions that are executed between two successive decision instructions. (2) To select a branch as in [1]. (3) Loosely, a conditional jump.

BUFFER. (1) A storage device used to compensate for a difference in rate of flow of data, or time of occurrence of events, when transmitting data from one device to another. (2) An isolating circuit used to prevent a driven circuit from influencing the driving circuit.

CALLING SEQUENCE. A specified arrangement of instructions and data necessary to set up and call a given subroutine.

CENTRAL PROCESSING UNIT. The unit of a computing system that includes the circuits controlling the interpretation and execution of instructions.

CHANNEL. (1) A path along which signals can be sent, e.g., data channel, output channel. (2) The portion of a storage medium that is accessible to a given reading station, e.g., track, band. (3) In communication, a means of one way transmission. Contrast with Circuit.

CHARACTER. An elementary mark or event that is used to represent data. A character is often in the form of a graphic spatial arrangement of connected or adjacent strokes.

CHARACTER RECOGNITION. The identification of graphic, phonic, or other characters by automatic means. See Magnetic Ink, Optical Character Recognition (OCR).

CHECK BIT. A binary check digit.

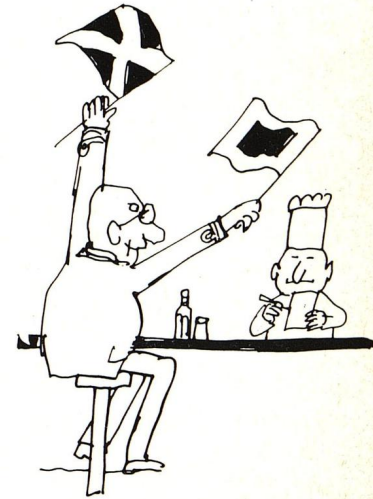
CHECK DIGIT. A digit used for the purpose of performing a check.

CIRCUIT. In communications, a means of two-way communication between two points, comprising associated "Go" and "Return" channels. Contrast with Channel.

CLEAR. (1) To place a storage device into a prescribed state, usually that denoting zero or blank. (2) To place a binary cell into the zero state.

CLOSED SUBROUTINE. A subroutine that can be stored at one place and can be connected to a routine by linkages at one or more locations. Contrast with Open Subroutine.

COBOL. (Common Business Oriented Language.) A business data processing language.



CODE. (1) A set of rules that is used to convert data from one representation to another, e.g., the set of correspondences in the American Standard Code for Information Interchange, X3.4. (2) The set of representations defined by the set of rules as in [1], e.g., a coded character set as in the above American Standard Code or the repertory of instructions for a particular computer. (3) Same as Encode. (4) See Binary Code, Computer Code, Machine Code, Operation Code.

COLUMN. (1) A vertical arrangement of characters or other expressions. (2) Loosely, a digit place.

COLUMN BINARY. Pertaining to the binary representation of data on punched cards in which adjacent positions in a column correspond to adjacent bits of data, e.g., each column in a 12-row card may be used to represent 12 consecutive bits of a 36-bit word.

COMMAND. (1) A control signal. (2) Loosely, an instruction in machine language. (3) Loosely, a mathematical or logic operator.

COMPILE. To prepare a machine language program from a computer program written in another programming language by making use of the overall logic structure of the program, or generating more than one machine instruction for each symbolic statement, or both, as well as performing the function of an assembler.

COMPUTER. (1) A device capable of solving problems by accepting data, performing prescribed operations on the data, and supplying the results of these operations. Various types of computers are calculators, digital computers, and analog computers. (2) In information processing, usually, an automatic stored program computer. (3) See Analog Computer, Digital Computer, General Purpose Computer, Special Purpose Computer, Stored Program Computer.

COMPUTER NETWORK. A complex consisting of two or more interconnected computing units.

COMPUTER PROGRAM. A plan or routine for solving a problem on a computer, as contrasted with such terms as fiscal program, military program, and development program.

COMPUTER WORD. A sequence of bits or characters treated as a unit and capable of being stored in one computer location. Synonymous with Machine Word.

CONDITIONAL JUMP. A jump that occurs if specified criteria are met.

CONSOLE. That part of a computer used for communication between the operator or maintenance engineer and the computer.

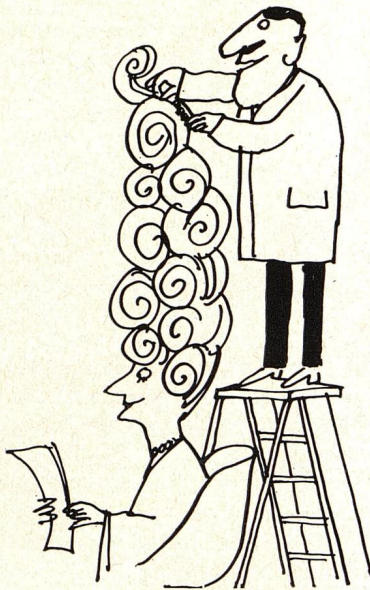
CONTROL UNIT. In a digital computer, those parts that effect the retrieval of instructions in proper sequence, the interpretation of each instruction, and the application of the proper signals to the arithmetic unit and other parts in accordance with its interpretation.

CONVERT. To change the representation of data from one form to another, e.g., to change numerical data from binary to decimal or from cards to tape.

DATA PROCESSING. Pertaining to any operation or any combination of opera-

tions on data.

DEBUG. To detect, locate, and remove mistakes from a routine or malfunc-



tions from a computer. Synonymous with Troubleshoot.

DECISION INSTRUCTION. An instruction that effects the selection of a branch of program, e.g., a conditional jump instruction.

DECODE. To apply a code so as to reverse some previous encoding.

DESTRUCTIVE READ. A read process that also erases the data in the source.

DIGIT. (1) A character used to represent one of the non-negative integers smaller than the radix, e.g., in decimal notation, one of the characters 0 to 9. (2) See Binary Digit, Check Digit, Equivalent Binary Digits.

DIGITAL. Pertaining to data in the form of digits. Contrast with Analog.

DIGITAL COMPUTER. A computer that operates on discrete data by performing arithmetic and logic processes on these data. Contrast with Analog Computer.

DIRECT ADDRESS. An address that specifies the location of an operand. Synonymous with One-Level Address.

DISPLAY TUBE. A tube, usually a cathode ray tube, used to display data.

DOWNTIME. The time interval during

which a device is malfunctioning.

DUMP. (1) To copy the contents of all or part of a storage, usually from an internal storage into an external storage. (2) A process as in [1]. (3) The data resulting from the process as in [1]. (4) See Dynamic Dump, Postmortem Dump, Selective Dump, Snapshot Dump, Static Dump.

DYNAMIC DUMP. A dump that is performed during the execution of a program.

EFFECTIVE ADDRESS. The address that is derived by applying any specified indexing or indirect addressing rules to the specified address and that is actually used to identify the current operand.

ELECTROSTATIC STORAGE. A storage device that stores data as electrostatically charged areas on a dielectric surface.

ENCODE. To apply the rules of a code. Synonymous with Code (3).

ENTRY POINT. In a routine, any place to which control can be passed.

EQUIVALENT BINARY DIGITS. The number of binary places required to count the elements of a given set.

EXECUTIVE ROUTINE. A routine that controls the execution of other routines. Synonymous with Supervisory Routine.

FILE. A collection of related records treated as a unit. Thus in inventory control, one line of an invoice forms an item, a complete invoice forms a record, and the complete set of such records forms a file.

FILE GAP. An area on a storage medium, such as tape, used to indicate the end of a file.

FIXED POINT. Pertaining to a numeration system in which the position of the point is fixed with respect to one end of the numerals, according to some convention.

FIXED STORAGE. A storage device that stores data not alterable by computer instructions, e.g., magnetic core storage with a lockout feature, or punched paper tape. Synonymous with Nonerasable Storage, Permanent Storage, Read-Only Storage.

FLOATING POINT. Pertaining to a nu-

meration system in which the position of the point does not remain fixed with respect to one end of the numerals.

FORMAT. (1) The arrangement of data. (2) See Address Format.

FORTRAN (FORtran TRANslating system). Any of several specific procedure oriented languages.

GENERAL PURPOSE COMPUTER. A computer that is designed to solve a wide class of problems.

GENERATE. To produce a program by selection of subsets from a set of skeletal coding under the control of parameters.

GENERATOR. A controlling routine that performs a generate function, e.g., Report Generator, I/O Generator.

HARDWARE. Physical equipment, e.g., mechanical, magnetic, electrical, or electronic devices. Contrast with Software.

HEAD. A device that reads, records, or erases data on a storage medium, e.g., a small electromagnet used to read, write, or erase data on a magnetic drum or tape, or the set of perforating, reading, or marking devices used for punching, reading, or printing on paper tape.

HEURISTIC. Pertaining to exploratory methods of problem solving in which solutions are discovered by evaluation of the progress made toward the final result. Contrast with Algorithm.

I/O (Input/Output). Input or output or both.

IMMEDIATE ADDRESS. Pertaining to an instruction in which an address part contains the value of an operand rather than its address. Synonymous with Zero-Level Address.

INDEX. (1) An ordered reference list of the contents of a file or document, together with keys or reference notations for identification or location of those contents. (2) A symbol or a number used to identify a particular quantity in an array of similar quantities. For example, the terms of an array represented by X_1, X_2, \dots, X_{100} have the indexes 1, 2, . . . 100 respectively. (3) Pertaining to an index register.

INDEX REGISTER. A register whose content is added to or subtracted from

the operand address prior to or during the execution of an instruction. Synonymous with B Box.

INDIRECT ADDRESS. An address that specifies a storage location that contains either a direct address or another indirect address. Synonymous with Multilevel Address.

INFORMATION RETRIEVAL. The methods and procedures for recovering specific information from stored data.

INPUT. (1) The data to be processed. (2) The state or sequence of states occurring on a specified input channel. (3) The device or collective set of devices used for bringing data into another device. (4) A channel for impressing a state on a device or logic element. (5) The process of transferring data from an external storage to an internal storage.

INSTRUCTION. (1) A statement that specifies an operation and the values or locations of its operands. In this context, the term instruction is preferable to the terms command or order which are sometimes used synonymously. Command should be reserved for electronic signals, and order should be reserved for sequence, interpolation, and related usage. (2) See Decision Instruction, Logic Instruction, Machine Instruction, Macro Instruction.

INSTRUCTION REGISTER. A register that stores an instruction for execution.

INTERLEAVE. To arrange parts of one sequence of things or events so that they alternate with parts of one or more other sequences of things or events and so that each sequence retains its identity.

INTERPRETER. (1) A program that translates and executes each source language expression before translating and executing the next one. (2) A device that prints on a punched card the data already punched in the card.

ITEM. A collection of related characters, treated as a unit. Contrast with File.

JUMP. (1) A departure from the normal sequence of executing instructions in a computer. Synonymous with Transfer [1]. (2) See Conditional Jump.

KEYPUNCH. A keyboard actuated device that punches holes in a card to represent data.

LANGUAGE. (1) A set of representations, conventions, and rules used to convey information. (2) See Artificial Language, Machine Language, Natural Language, Object Language, Problem Oriented Language, Procedure Oriented Language, Programming Language, Source Language, Target Language.

LIBRARY ROUTINE. A proven routine that is maintained in a program library.

LINEAR PROGRAMMING. The analysis or solution of problems in which linear function of a number of variables is to be maximized or minimized when those variables are subject to a number of constraints in the form of linear inequalities.

LOCATION. Loosely, any place in which data may be stored.

LOGIC INSTRUCTION. An instruction that executes an operation that is defined in symbolic logic, such as AND, OR, NOR.

LOOP. A sequence of instructions that is executed repeatedly until a terminal condition prevails.

MACHINE CODE. An operation code that a machine is designed to recognize.

MACHINE INSTRUCTION. An instruction that a machine can recognize and execute.

MACHINE LANGUAGE. A language that is used directly by a machine.

MACRO INSTRUCTION. An instruction in a source language that is equivalent to a specified sequence of machine instructions.

MAGNETIC CARD. A card with a magnetic surface on which data can be stored by selective magnetization of portions of the flat surface.

MAGNETIC CORE. A configuration of magnetic material that is, or is intended to be, placed in a spatial relationship to current-carrying conductors and whose magnetic properties are essential to its use. It may be used to concentrate an induced magnetic field as in a transformer, induction coil, or armature, to retain a magnetic polarization for the purpose of storing data,

or for its nonlinear properties as in a logic element. It may be made of such material as iron, iron oxide, or ferrite and in such shapes as wires, tapes, toroids, or thin film.

MAGNETIC DISC. A flat circular plate with a magnetic surface on which data can be stored by selective magnetization of portions of the flat surface.

MAGNETIC DRUM. A right circular cylinder with a magnetic surface on which data can be stored by selective magnetization of portions of the curved surface.

MAGNETIC INK. An ink that contains particles of a magnetic substance whose presence can be detected by magnetic sensors.

MAGNETIC STORAGE. A storage device that utilizes the magnetic properties of materials to store data, e.g., magnetic cores, tapes, and films.

MAGNETIC TAPE. (1) A tape with a magnetic surface on which data can be stored by selective polarization of portions of the surface. (2) A tape of magnetic material used as the constituent in some forms of magnetic cores.

MEMORY. Same as Storage.

MERCURY STORAGE. A storage device that utilizes the acoustic properties of mercury to store data.

MICR (Magnetic Ink Character Recognition). The machine recognition of characters printed with magnetic ink. Contrast with OCR.

MULTI-ADDRESS. Pertaining to an instruction that has more than one address part.

MULTILEVEL ADDRESS. Same as Indirect Address.

MULTIPLEX. To interleave or simultaneously transmit two or more messages on a single channel.

MULTIPROGRAMMING. Pertaining to the interleaved execution of two or more programs by a computer. Contrast with Parallel Processing.

N-LEVEL ADDRESS. A multilevel address that specifies N Levels of addressing.

NATURAL LANGUAGE. A language whose rules reflect and describe current usage rather than prescribe usage. Contrast with Artificial Language.

NONDESTRUCTIVE READ. A read process that does not erase the data in the source.

NUMERATION SYSTEM. A system for the representation of numbers, e.g., the decimal system, the roman numeral system, the binary system. Synonymous with Numeral System.

NUMERICAL ANALYSIS. The study of methods of obtaining useful quantitative solutions to problems that have been expressed mathematically, including the study of the errors and bounds on errors in obtaining such solutions.

NUMERICAL CONTROL. Pertaining to the automatic control of processes by the proper interpretation of numerical data.

OCR (Optical Character Recognition). Machine identification of printed characters through use of light-sensitive devices. Contrast with MICR.

OFFLINE. Pertaining to equipment or devices not under direct control of the central processing unit.

ONLINE. Pertaining to equipment or devices under direct control of the central processing unit.

OPEN SUBROUTINE. A subroutine that must be relocated and inserted into a routine at each place it is used. Synonymous with Direct Insert Subroutine. Contrast with Closed Subroutine.

OPERAND. That which is operated upon. An operand is usually identified by an address part of an instruction.

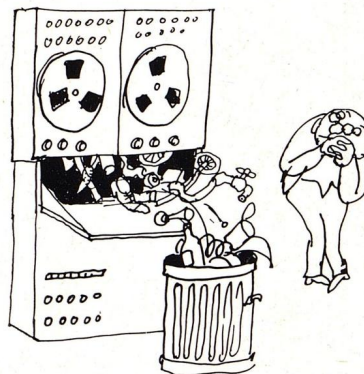
OPERATION. (1) A defined action, namely, the act of obtaining a result from one or more operands in accordance with a rule that completely specifies the result for any permissible combination of operands. (2) The set of such acts specified by such a rule, or the rule itself. (3) The act specified by a single computer instruction. (4) A program step undertaken or executed by a computer, e.g., addition, multiplication, extraction, comparison, shift, transfer. The operation is usually specified by the operator part of an instruction. (5) The event or specific action performed by a logic element.

OPERATION CODE. A code that represents specific operations. Synony-

mous with Instruction Code.

OPERATOR. (1) In the description of a process, that which indicates the action to be performed on operands. (2) A person who operates a machine.

OPTICAL SCANNER. (1) A device that scans optically and usually generates an analog or digital signal. (2) A device that optically scans printed or written data and generates their digital representations. (3) Synonymous with Visual Scanner.



OUTPUT. (1) Data that has been processed. (2) The state or sequence of states occurring on a specified output channel. (3) The device or collective set of devices used for taking data out of a device. (4) A channel for expressing a state of a device or logic element. (5) The process of transferring data from an internal storage to an external storage.

OVERFLOW. (1) That portion of the result of an operation that exceeds the capacity of the intended unit of storage. (2) Pertaining to the generation of overflow as in [1].

PACKING DENSITY. The number of useful storage cells per unit of dimension, e.g., the number of bits per inch stored on a magnetic tape or drum track.

PARALLEL PROCESSING. Pertaining to the simultaneous execution of two or more sequences of instructions by a computer having multiple arithmetic or logic units. Contrast with Multiprogramming.

PARALLEL STORAGE. A storage device in which characters, words, or digits

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are dealt with simultaneously.

PARAMETER. A variable that is given a constant value for a specific purpose or process.

PARITY BIT. A binary digit appended to an array of bits to make the sum of all the bits always odd or always even.

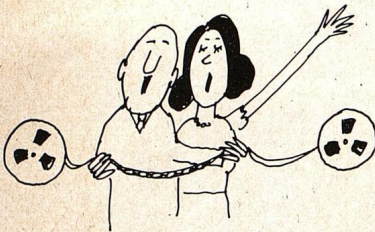
PATTERN RECOGNITION. The identification of shapes, forms, or configurations by automatic means.

PLUGBOARD. A perforated board that accepts manually inserted plugs to control the operation of equipment. Synonymous with Control Panel.

POSTMORTEM DUMP. A static dump used for debugging purposes that is performed at the end of a machine run.

PROBLEM ORIENTED LANGUAGE. A programming language designed for the convenient expression of a given class of problems.

PROCEDURE ORIENTED LANGUAGE. A programming language designed for the convenient expression of procedures used in the solution of a wide class of problems.



PROGRAM. (1) A plan for solving a problem. (2) Loosely, a routine. (3) To devise a plan for solving a problem. (4) Loosely, to write a routine. (5) See Computer Program, Source Program.

PROGRAMMING LANGUAGE. A language used to prepare computer programs.

PUNCHED CARD. (1) A card punched with a pattern of holes to represent data. (2) A card as in [1] before being punched.

PUNCHED TAPE. A tape on which a pattern of holes or cuts is used to represent data.

RADIX. (1) A quantity whose successive integral powers are the implicit multi-

pliers of the sequence of digits that represent a number. For example, if the radix is five, then 143.2 means 1 times 5 to the second power, plus 4 times 5 to the first power, plus 3 times 5 to the zero power, plus 2 times 5 to the minus one power. Synonymous with Base.

RANDOM ACCESS. (1) Pertaining to the process of obtaining data from, or placing data into, storage where the time required for such access is independent of the location of the data most recently obtained or placed in storage. (2) Pertaining to a storage device in which the access time is effectively independent of the location of the data.

READ. (1) To acquire data from a source. (2) See Destructive Read, Non-destructive Read.

REAL TIME. (1) Pertaining to the actual time during which a physical process transpires. (2) Pertaining to the performance of a computation during the actual time that the related physical process transpires in order that results of the computation can be used in guiding the physical process.

RECORD. A collection of related items of data, treated as a unit. Contrast with File.

REGISTER. (1) A device capable of storing a specified amount of data, such as one word. (2) See Address Register, Index Register, Instruction Register.

RELATIVE ADDRESS. The number that specifies the difference between the absolute address and the base address.

RERUN POINT. That location in the sequence of instructions in a computer program at which all information pertinent to the rerunning of the program is available.

ROUTINE. (1) A set of instructions arranged in proper sequence to cause a computer to perform a desired task. (2) See Executive Routine, Library Routine, Subroutine.

ROW BINARY. Pertaining to the binary representation of data on punched cards in which adjacent positions in a row correspond to adjacent bits of

data, e.g., each row in an 80 column card may be used to represent 80 consecutive bits of two 40 bit words.

RUN. A single, continuous performance of a computer routine.

SEARCH. (1) To examine a set of items for those that have a desired property. (2) See Binary Search.

SELECTIVE DUMP. A dump of a selected area of storage.

SERIAL ACCESS. Pertaining to the process of obtaining data from, or placing data into, storage when there is a sequential relation governing the access time to successive storage locations.



SIMULATE. To represent the functioning of one system by another, e.g., to represent one computer by another, to represent a physical system by the execution of a computer program, to represent a biological system by a mathematical model.

SNAPSHOT DUMP. A selective dynamic dump performed at various points in a machine run.

SOFTWARE. (1) The collection of programs and routines associated with a computer, e.g., compilers, library routines. (2) All the documents associated with a computer, e.g., manuals, circuit diagrams. (3) Contrast with Hardware.

SOURCE LANGUAGE. A language that is an input to a given translation process.

SOURCE PROGRAM. A program written in a source language.

SPACE. (1) A place intended for the storage of data, e.g., a place on a printed page or a location in a storage medium. (2) A basic unit of area on a record, i.e., an area that may contain no

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more than one printed character. (3) One or more blanks. (4) To move from one place to another according to a prescribed format, e.g., to move horizontally to the right on a printed page or vertically down a page.

SPECIAL PURPOSE COMPUTER. A computer that is designed to solve a restricted class of problems.

STATEMENT. In computer programming, a meaningful expression or generalized instruction in a source language.

STATIC DUMP. A dump that is performed at a particular point in time with respect to a machine run, frequently at the end of a run.

STEP. (1) One operation in a computer routine. (2) To cause a computer to execute one operation.

STORAGE. (1) Pertaining to a device into which data can be entered, in which it can be held, and from which it can be retrieved at a later time. (2) Loosely, any device that can store data. (3) Synonymous with Memory. (4) See Associative Storage, Auxiliary Storage, Electrostatic Storage, Fixed Storage, Magnetic Storage, Mercury Storage, Parallel Storage, Temporary Storage.

STORAGE ALLOCATION. The assignment of blocks of data to specified blocks of storage.

STORAGE CAPACITY. The amount of data that can be contained in a storage device.

STORAGE CELL. An elementary unit of storage, e.g., a binary cell, a decimal cell.

STORAGE DEVICE. A device into which data can be inserted, in which it can be retained, and from which it can be retrieved.

STORED PROGRAM COMPUTER. A digital computer that, under control of internally stored instructions, can synthesize, alter, and store instructions as though they were data and can subsequently execute these new instructions.

SUBROUTINE. (1) A routine that can be part of another routine. (2) See Closed

Subroutine, Open Subroutine.

SYMBOLIC ADDRESS. An address expressed in symbols convenient to the programmer.

SYMBOLIC LOGIC. The discipline that treats formal logic by means of a formalized artificial language or symbolic calculus whose purpose is to avoid the ambiguities and logical inadequacies of natural languages.

TAPE DRIVE. A device that moves tape past a head. Synonymous with Tape Transport.

TAPE TO CARD. Pertaining to equipment or methods that transmit data from either magnetic tape or punched tape to punched cards.

TAPE UNIT. A device containing a tape drive, together with reading and writing heads and associated controls. Synonymous with Tape Station.

TARGET LANGUAGE. A language that is an output from a given translation process. Synonymous with Object Language.

TEMPORARY STORAGE. In programming, storage locations reserved for intermediate results. Synonymous with Working Storage.

TERMINAL. A point in a system or communication network at which data can either enter or leave.

TIME SHARING. Pertaining to the interleaved use of the time of a device.

TRACK. The portion of a moving storage medium, such as a drum, tape, or disc, that is accessible to a given reading head position.

TRANSDUCER. A device for converting energy from one form to another.

TRANSFORM. To change the form of data according to specific rules.

VARIABLE. A quantity that can assume any of a given set of values.

WORD LENGTH. The number of bits or other characters in a word.

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