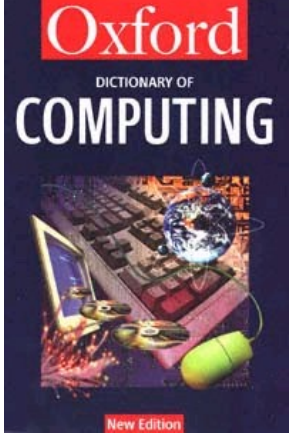

A Dictionary of Computing

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w derives A (the empty word) if and only if *w* has the same number of *as* as *bs*.

The question of whether *w* derives *w'* is algorithmically undecidable.

sense To determine the condition or content of a signal or storage location. When used in reference to a storage location the word has the same meaning as read.

sensitivity analysis Investigation of the degree to which the behavior of a system is affected by a change in the value of some (explicit or implicit) parameter or variable, or by a combination of changes. For example, a simple analysis might determine how the performance of a system is impacted by changing the number and sizes of the storage buffers that are allocated to that system.

sensor *Another name for* transducer.

sensor-data fusion The idea that data from multiple sensors should be combined so as to remove or reduce noise and uncertainty and increase confidence in the result. Redundancy, majority voting, and probability methods can be used for sets of simple sensors of the same modality, but major research issues are involved where the sensors are complex, as in vision, or operate across different modalities.

sentence *See* predicate calculus.

sentence symbol (start symbol) *See* grammar.

sentential form See grammar.

sentinel A *datum that indicates some important state, usually in the context of input or output. For example, an end-of-data sentinel means all the data has been read. *See also* rogue value, flag.

separator A symbol that separates statements in a programming language, e.g. the semicolon in Algol-type languages.

SEQUEL A database *query language, precursor of *SQL.

sequence 1. A *function whose domain is the set of positive integers (or sometimes the set of nonnegative integers). The image set can thus be listed s_1, s_2,.... where s_t, is the value of the function given argument t. A *finite sequence* (or *list*) is a function whose domain is

$$\{1,2,\ldots,n\} \text{ for } n \geq 1$$

and hence whose image set can be listed

$$s_1, s_2, \ldots, s_n$$

2. The listing of the image set of a sequence. Hence it is another name for *string.

sequence control register A part of the *control unit that causes the steps of the fetch and execute processes to occur in the correct sequence/timing. *See* program counter.

sequence generator A digital logic circuit whose purpose is to produce a prescribed sequence of outputs. Each output will be one of a number of symbols or of binary or *q-ary *logic levels. The sequence may be of indefinite length or of predetermined fixed length. A binary *counter is a special type of sequence generator. Sequence generators are useful in a wide variety of coding and control applications.

sequencer 1. In computer music, either a computer program or hardware that allows a composer to arrange a sequence or sequences of musical notes. These may then be replayed as continuous loops or on receipt of some trigger event. Often the anchor note for the sequence may be input by means of a conventional *MIDI keyboard. Early sequencers were monophonic hardware solutions, often custom-built. Many modern computer programs for music composition can be viewed as sequencers, but it is the ability to loop, be triggered, and to alter the anchor note that gives the composer the ability to use sequencer technology in live performance.

2. A logic circuit that produces outputs that are intended to provide coordination stimuli for other logic circuits. The exact timing and sequence of these control outputs is dependent on the sequencer circuitry and may depend on a set of input control signals provided by external devices.

sequencing 1. The procedure by which ordered units of data (octets or messages) are numbered, transmitted over a communications network (which may rearrange their order), and reassembled into the original order at their destination.

2. Proceeding through a program in its ordinary order, normally from sequential memory locations. *See also* loop.