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A Dictionary of  
**Computing**

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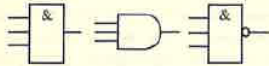
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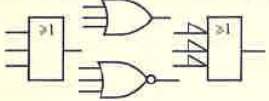
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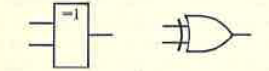
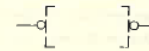
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Combinational logic symbols:  
AND function

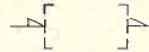
## OR function



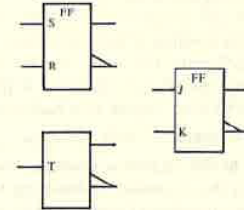
## exclusive-OR function

Indicator symbols  
negation indicator

## polarity indicator



## Flip-flops



## Commonly used logic symbols

as verbs: *log off*, *log out*, or *sign off*. By logging off, the user ensures that all the system resources that have been used during the session are accounted for, and any temporary files created during the session are deleted.

**logon 1.** (or *log on*) *See* login.

2. A unit of information, equal to the product of one unit of \*bandwidth by one unit of time, in Denis Gabor's physical theory of communication. In contrast, Shannon's mathematical theory of communication uses the concept of \*entropy.

**logout** (or *log out*) *See* logoff.**longitudinal redundancy check (LRC)** *See* cyclic redundancy check.**lookahead** *Short for* carry lookahead.

**lookahead unit** A unit forming part of an instruction unit pipeline in computers such as \*Stretch.

**lookup table** *See* table lookup.

**loop 1.** A sequence of instructions that is repeated until a prescribed condition, such as agreement with a data element or completion of a count, is satisfied. *See also* do loop.

2. A configuration of a \*local area network

that consists of nodes connected serially in a ring topology. *See* ring network.

**3. (local loop)** The (twisted pair) connection from a switching exchange to the subscriber terminal.

**loop invariant** *See* invariant.

**lossless coding** Coding in which no \*information whatsoever is lost during the \*encoding (or \*decoding) process. Generally, \*encryption and \*decryption are lossless, as is \*channel coding. Strictly, \*data compaction is lossless, while \*data compression is not, but the latter term is often used for the former. The decoding of (i.e. recovery from) compression and compaction are lossless. But the decoding of a signal received from a \*channel is usually lossy (strictly not lossless) by design, since the \*noise at least must be lost; the message entering the channel will usually have been prepared so as to permit this loss by the use of an \*error-correcting code.

**lossless compression** Any method of \*compression that allows the original data to be recovered from the compressed data. *See also* lossless coding.