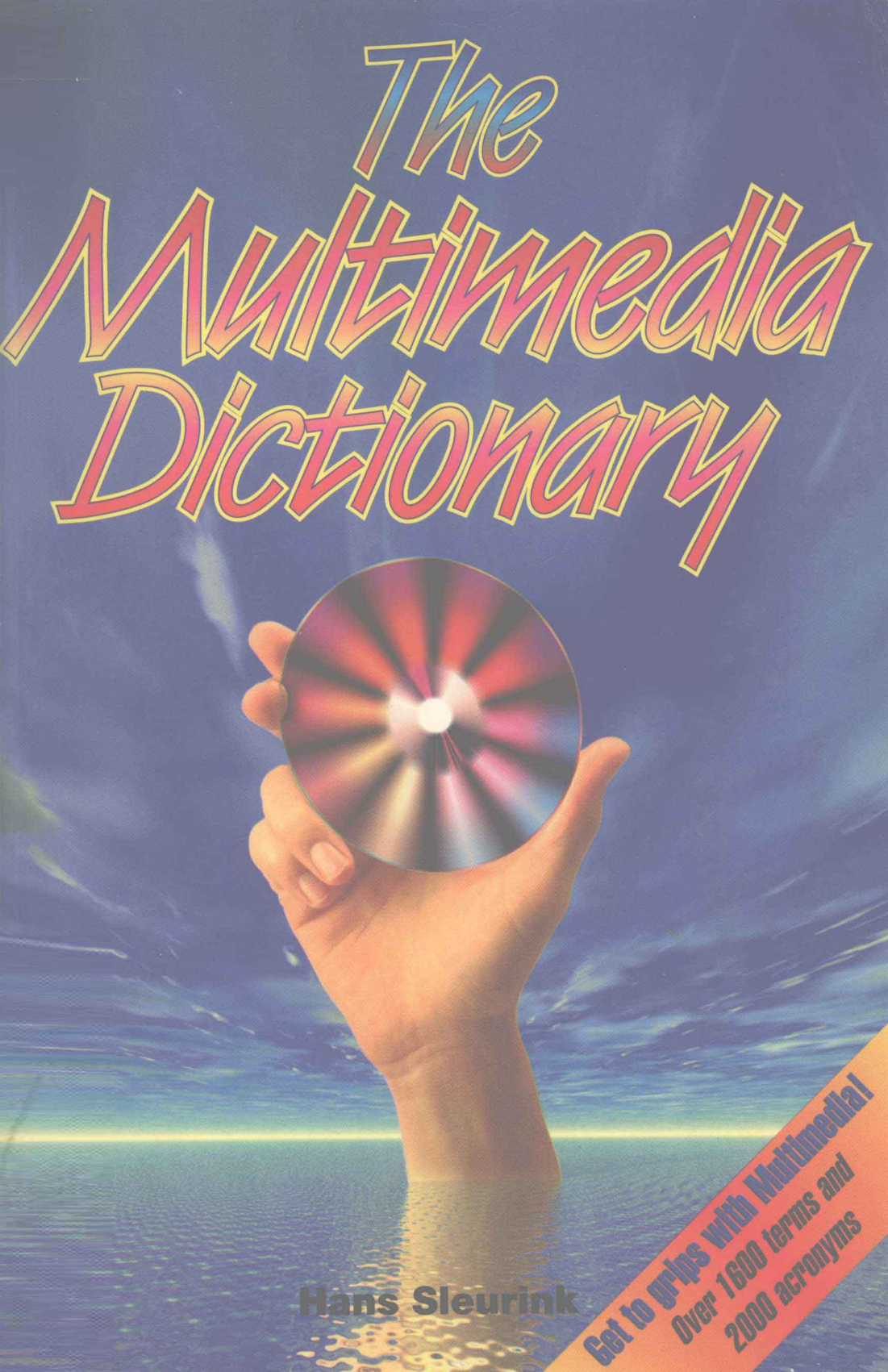
The Multimedia Dictionary



Hans Sleurink

Get to grips with Multimedia!
Over 1600 terms and
2000 acronyms

The **Multimedia** dictionary

Edited by

H. Sleurink

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FOREWORD

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The contribution of a number of companies and individuals was crucial in the making of this publication. We are particularly indebted to Apple, IBM, Microsoft, Philips and PTT Telecom. The knowledge, dedication and efforts of André Schuurman, Gea Vellinga, Ester Verheul and Irma de Witt also played an essential role. All of the above valued colleagues work for Data Scripta, which consistently gave constructive criticism in the best possible manner. Dark Mooy, systems analyst, and Karin Kincaide, who makes teaching aids for the graphic industry, also made significant contributions to the final product through their critical questions and suggestions, during the translation.

Nothing made by people is perfect. This must be equally true of this book, which strives to explain the terminology of an area undergoing explosive growth. New ideas, concepts, technologies and terms are constantly arising. Not all of these are crucially important, but nevertheless, should you come across terms you think should be included, please let me know. The same applies if you have any additions for the terms which are included, I would be pleased to hear them.

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Figure words

1.22
See: floppy disk.

1.44
See: floppy disk.

10Base-2
See: thin Ethernet.

10Base-5
See: thick Ethernet.

10Base-T
A common used *IEEE* standard for *Ethernet*. The standard describes, amongst others, the cabling, the connection between cable and network card and the *network topology*. 10Base-T uses *unshielded twisted pair* cables. The connector is a *RJ-45 jack* and it uses the *star* topology. The speed is 10 megabits per second.

100Base-T
A *network protocol*, developed by 3COM, with speeds up to 100 *Mbit/s*. It is derived from *100VG-AnyLAN*. A difference is that it uses the *CSMA/CD* protocol. 100Base-T is also called *Fast Ethernet*. Expectations are that the protocol will become a standard as *IEEE* 802.3.

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A *network protocol* developed by Hewlett-Packard in cooperation with IBM and AT&T which can operate at a speed of 100 *Mbit/s*. 100VG-AnyLAN's advantage (and an important difference from its rival *100Base-T*) is the access method. The access method—called *demand priority*—guarantees *bandwidth*. This makes it more suitable for *multimedia* applications. 100VG-AnyLAN is known as *IEEE* standard 802.12.
See also: guaranteed bandwith.

16 bit
A computer systems and software description that processes information as 2-byte words (16 bits). The more bytes that can be processed

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See also: guaranteed bandwith.

16 bit
A computer systems and software description that processes information as 2-byte words (16 bits). The more bytes that can be processed

simultaneously, the faster the system. The Intel 8086/8088 and 80286 are 16-bit processors.
See also: 80x8; 80x86; 32 bit; 64 bit.

16450 UART
A *chip* for *serial* communication in a computer. Like its predecessor, the *8250 UART*, it still has a one *byte memory* buffer. The chip does, however, support higher communication speed.
See also: 16550 UART; universal asynchronous receiver/transmitter.

16550 UART
A *chip* for *serial* communication in a computer. This chip is the successor of the *16450 UART*. It has two 16 *byte memory* buffers (one for incoming and one for outgoing traffic). The speed of communication is therefore higher than with the 16450 UART.
See also: 8250 UART; universal asynchronous receiver/transmitter.

2.88
See: floppy disk.

3-chip module
A type of 1-megabyte SIMM module, which contains two 4-megabit chips and one 1-megabit *chip*, instead of nine 1-megabit chips. This type of chip can only be used on newer motherboards because their timing differs slightly from the *9-chip module*.
See also: single in-line memory module.

3.5-inch
1. Description for a *floppy disk* with a 3.5-inch diameter.
2. A standard for internal devices and housings which are 3.5 inches wide.

32 bit
A computer systems and software description that processes information as 4-byte words (32 bits). The more bytes that can be processed simultaneously, the faster the system. The Intel 80386 and 80486 and the Motorola *680x0* are 32-bit processors.
See also: 80x86DX; 680x0; 16 bit; 64 bit.

340x0
A *graphic coprocessor* by Texas Instruments. The 34010 and 34020 models are controlled using the so-called TIGA-interface (Texas Instruments Graphics Architecture).

360K
See: floppy disk.

3D
Description of an object that is spatial and therefore has height, width and depth.

3D digitizer
A device for scanning three-dimensional objects and saving the *image* in a *digital* format. There are two kinds. Most commonly used is the surface *scanner* that scans an object with *laser* rays or uses a *camera* and a beam of light to make an exposure. This results in a frame model of the original. Some scanners can also record the colors of the object. This is stored separately as a *bitmap*. When the image is displayed the colors are painted over the frame model.
The second kind is used frequently in the medical world. It scans the content of an object and stores this *data* as so-called *voxels*. These devices often use electromagnetic radiation to accomplish this.

3DO
The name for a *multimedia* format as well as a multimedia system designed by the 3DO company. 3DO is used to create and playback *interactive* multimedia productions (including *full-motion* and *full-screen video*). A double-speed *CD-ROM* is used for storage.
A complete system consists of: development software, prescribed compression and decompression methods and a *compact disc* drive. 3DO can be compared with CD-i and therefore a potential competitor.
See also: Compact Disc Interactive.

4:2:2
Indication for the quality of digital *component video* and a specification for video signal storage.
The first digit (4) indicates the number of bytes used for recording the brightness. The next two digits indicate the number of bytes used for the color system. Sometimes a fourth digit is added (for example: 4:2:2:4). This digit indicates the number of bytes used for the *key-signal*.
Quality indications in use are: 4:2:2 (professional quality), 4:1:1 (consumer quality) and 4:4:4 (high-end professional quality). The 4:2:2 ratio is described among others in the *CCIR 601/656* standard for video.
See also: YCrCb.

5.25 inch

1. A *floppy disk* with a 5.25-inch diameter.
2. A standard for internal devices and housings that are 5.25 inches wide.

64 bit

A computer systems and software description that processes information as 8-byte words (64 bits). The more bytes that can be processed simultaneously, the faster the system. The Intel *Pentium* and the DEC *Alpha AXP* are 64-bit microprocessors.
See also: 16 bit; 32 bit.

680x0

The microprocessor family manufactured by Motorola used in Apple *Macintosh* computers and others. The first 68000 is a 32-bit processor with a 16-bit wide *bus* connection with the motherboard and an addressable *memory* of 16 megabytes. The successors are the 68020 (32-bit wide bus and 4 gigabytes addressable memory), the 68030 (a faster version of 68020 with a built-in cache) and 68040 (three times faster than the 68030 with a built-in numeric *coprocessor*).
See also: central processing unit; 32 bit; 64 bit.

720K

See: floppy disk.

80486DXx

A type of microprocessor manufactured by Intel used in PC-compatible computers. The last 'x' is replaced by a digit (for example 80486DX2) which indicates that *clock* frequency in the processor is higher than the frequency used in the motherboard. 'DX2' means that the frequency is doubled; 'DX4' means (inconsistently) that the frequency is tripled.
See also: central processing unit; bus; 80x86DX.

80x86DX

A type of microprocessor manufactured by Intel used in PC-compatible computers. The 'x' is replaced by a digit (for example 80386DX or 80486DX) which indicates the processor generation. 'DX' means that the processor has a complete (32-bit wide) connection with the motherboard and that the *clock* frequency in the processor is equal to the frequency used in the motherboard.
See also: central processing unit; 80x86SX; 80x86SL; 80x87.

80x86SL

A type of microprocessor manufactured by Intel used in PC-compatible computers. The 'x' is replaced by a digit (for example 80386SL or 80486SL) which indicates the processor generation. 'SL' means that the processor has lower power consumption than *80x86DX* or *80x86SX*, while it is functionally identical. This makes it suitable for portable computers.
See also: central processing unit; 80x86DX; 80x86SX; 80x87.

80x86SX

A type of *microprocessor* manufactured by Intel used in PC-compatible computers. The 'x' is replaced by a digit (for example 80386DX or 80486DX) which indicates the processor generation. 'SX' means that the processor lacks some of the features present in *80x86DX* processors. The 80386SX, for instance, has a 16-bit connection to the motherboard and a 32-bit internal architecture. The 80486SX has no numerical coprocessor while the 80486DX does.
See also: central processing unit; 80x86DX; 80x86SL; 80x87.

80x87

A type of coprocessor manufactured by Intel used in PC-compatible computers. The 'x' is replaced by a digit (for example 80287, 80387 or 80487) which indicates the processor generation. The '7' indicates that it is the numerical *coprocessor* to the matching 'DX' or 'SX' series.
See also: 80x86DX; 80x86SX; 80x86SL.

8250 UART

A *chip* for *serial* communication in a computer. The maximum transmission speed for this chip is 9600 bits per second with an internal data *buffer* of (only) one *byte*. This chip is outdated when its speed is compared to the capabilities of newer modems and devices.
See also: 16450 UART; 16550 UART.

8514/A

An IBM display adapter. Possible screen resolutions are 1024 * 768 pixels (*interlaced*) with 256 colors and 640 * 480 pixels with 256 colors. It contains an on-board *coprocessor* for performing 2-D graphics and it is designed to coexist with VGA for dual *monitor* capability.
See also: video adapter; video mode.

9-chip module

A type of 1-megabyte SIMM containing a total of 9-megabit *memory* divided into nine 1-megabit chips.
See also: single in-line memory module; 3-chip module.