



Dictionary of Computer and Internet Terms

Tenth Edition



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- More than 3,200 key terms defined and explained, many with helpful illustrations and tables
 - Practical guidance for the business software users, including computer security, law, and ethics
 - Computer science principles and programming examples in the most widely used computer languages
 - Includes new media, digital photography and audio, Internet culture and humor

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Tenth Edition

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TO THE READER

Computers are no longer just for specialists. Today, computing is not just a profession and a hobby; it is also a tool used in virtually all human activities.

That's why we've compiled this book of background knowledge. Its purpose is to tell you the things other people think you already know.

We design this book to have a convenient size so it can be easily carried around. In compiling a book this size, we have had to be selective. The quickest way to identify a word that you can't find in a book is probably to do a web search (*see* SEARCH ENGINE). Also, some terms are almost always abbreviated, and in that case you should look for the abbreviation rather than the full term.

Much has changed since the first edition of this book was published more than twenty years ago. New terms are being invented every day. We regularly update the book, and this edition contains new entries on a variety of topics including Windows Vista and Mac OS X. We've also cut out material that was showing its age.

Terms are marked *slang* or *humorous* if they are seldom used in serious writing. They are marked as *jargon* if, in our estimation, they are somewhat pretentious new names for old concepts and are not likely to endure. We provide occasional *Usage notes* to explain grammar, spelling, and proper use of words, such as the exact difference between *disc* and *disk*.

Throughout, we use SMALL CAPITALS to mark important words that are defined elsewhere in this book. By following cross-references, you can quickly find many entries that pertain to whatever interests you. Here are some entries you may wish to start with to learn about particular topics:

- Internet culture: CHAT ROOM
- right and wrong: COMPUTER ETHICS
- safe computing: COMPUTER SECURITY
- solving exceptionally difficult problems: ARTIFICIAL INTELLIGENCE
- productively using computers in business and daily life: APPLICATION PROGRAM
- listening to music: DIGITAL MUSIC
- taking pictures: DIGITAL CAMERA
- creating web pages: HTML
- writing computer programs: PROGRAMMING LANGUAGE
- software that controls a computer: OPERATING SYSTEM
- how a computer works: COMPUTER ARCHITECTURE
- networking and the Internet: INTERNET
- connecting computers wirelessly: WIRELESS COMMUNICATION
- electronic components: TRANSISTOR

Be sure to notice the visual dictionary of symbols at the end of the book. If you don't know what Σ or \approx or \bullet is called, don't worry; you can look it up there.

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Many of the words used in this book are registered trademarks. We have made no attempt to determine or report their legal status. For further information about any product name, consult the manufacturer's literature.

NUMBERS

1-2-3 *see* LOTUS 1-2-3.

3Com a leading producer of networking hardware, mainly focusing on residential and small to medium businesses. In recent years the company has sharpened its focus in this area by acquiring U.S. Robotics but selling off Palm (see PALM). Their web address is *www.3com.com*.

3D *see* THREE-DIMENSIONAL GRAPHICS.

4×, 8×, 16× . . . 64× (etc.) describing a CD or DVD drive, able to transfer data at 4, 8, 16 (etc.) times the speed of normal audio or video. For example, a 16× CD-R drive can record a full CD, equivalent to about an hour of audio, in about four minutes.

5.1 a format of SURROUND SOUND with five speakers that transmit the full audio spectrum and one that transmits only bass. The five full-range speakers are positioned as front left, center, and right, and rear left and right. The bass speaker, or SUBWOOFER, is usually placed in front. *See* Fig. 253, p. 464. *Compare* 6.1, 7.1.

6.1 a format of SURROUND SOUND with six full-range speakers in the left front, center front, right front, left, right, and rear center positions, plus a SUBWOOFER for additional bass. *Compare* 5.1.

7-layer model *see* DATA COMMUNICATION.

7.1 a format of SURROUND SOUND with seven full-range speakers in the left front, center front, right front, left, right, left rear, and right rear positions, plus a SUBWOOFER for additional bass. *Compare* 5.1.

8.3 filename a filename consisting of up to 8 letters or digits, a dot (period), and up to three more letters or digits, as in DOS and Windows 3.

10/100 (describing a network adapter) capable of operating at 10 or 100 megabits per second. *See* 10BASE-T; 100BASE-T.

10/100/1000 (describing a network adapter) capable of operating at 10, 100, and 1000 megabits per second. *See* 10BASE-T; 100BASE-T; 1000BASE-T.

10base-2 thinwire Ethernet; a type of Ethernet connection using thin coaxial cable with BNC T-connectors, a bus topology, and a maximum data rate of 10 megabits per second. Cable segments can range from 2 feet (0.6 m) to 607 feet (185 m) in length. *See* ETHERNET; THINWIRE.

Usage note: In this and similar terms, *10* stands for the data rate in megabits per second; *base* means *baseband* (not modulated on a higher-frequency carrier); and *2* is the approximate maximum cable length in hundreds of meters. The hyphen is often left out.

10base-5 thickwire Ethernet; a type of Ethernet connection using thick coaxial cable with special cable-piercing taps, a bus topology, and a maximum data rate of 10 megabits per second. Cable segments can range from 8.2 feet (2.5 m) to 1640 feet (500 m) in length. *See* ETHERNET; THICKWIRE.

10base-F fiber-optic Ethernet; a type of Ethernet connection using fiber-optic cable and a maximum data rate of 10 megabits per second. Cables can be as long as 1.2 miles (2 km). *See* ETHERNET; FIBER OPTICS.

10base-T twisted-pair Ethernet using Category 3 or Category 5 cable and RJ-45 modular connectors, a star topology with hubs, and a maximum data rate of 10 megabits per second. Each cable can be up to 328 feet (100 m) long. However, because they are unshielded, these cables are somewhat subject to electrical noise if placed close to motors or fluorescent lights. *See* ETHERNET; CROSSOVER CABLE; CATEGORY 5 CABLE.

16-bit program a program that runs on Intel microprocessors using only the features of the 8088 or 80286, with 16-bit internal registers. Most DOS applications and many earlier Windows applications are 16-bit programs. *Contrast* 32-BIT PROGRAM.

24-bit graphics graphical images that use 24 bits to represent each color, so that each color is made by mixing red, green, and blue, each of which is measured on a scale of 0 to 255, and a total of 16,777,216 colors is available. Often called “millions of colors.”

24 × 7 (or **24/7**, **24-7**) available 24 hours a day, 7 days a week.

32-bit program a program that uses the 32-bit internal registers and large memory capacity of the Intel 386, 486, Pentium, or other compatible microprocessor; generally faster than a 16-bit program doing the same computation on the same CPU. *Contrast* 16-BIT PROGRAM. *See also* WIN32S.

32-bit Windows Microsoft Windows 95, NT, and their successors for the Pentium and related processors, as distinct from Windows 1.0–3.1 (apart from 32-bit add-ons) or Windows CE. *See* WINDOWS.

35-mm equivalent the focal length of lens, on a 35-mm film camera, that would cover the same field of view as a particular digital camera and lens. *See* CROP FACTOR; FOCAL LENGTH; ZOOM.

47 USC 227 the 1991 U.S. law that banned “junk faxing” (unsolicited advertising by fax). *See* JUNK FAX.

100base-F fast fiber-optic Ethernet, like 10base-F but with a maximum data rate of 100 megabits per second.

100base-T fast twisted-pair Ethernet using Category 5 cable and RJ-45 modular connectors; like 10base-T but with a maximum data rate of 100 megabits per second. Many network cards and hubs are compatible with

both 10base-T and 100base-T transmission. Thus, you can convert a 10base-T network to 100base-T component-by-component and switch to the higher speed when all the components have been modernized.

386 the first Intel microprocessor with 32-bit internal registers and good support for multitasking and extended memory; able to run Windows 95, but too slow for most present-day software. *See* MICROPROCESSOR.

403 FORBIDDEN HTTP error message indicating that the HTTP server is not permitted to read a file. This usually means that the owner of the web page has not set the correct permissions on the file. *See* PERMISSION.

404 NOT FOUND HTTP error message indicating that a web address is invalid. *See* DEAD LINK.

419 scam, 4-1-9 scam a form of fraud conducted through e-mail, usually from Nigeria, where it violates section 4-1-9 of the criminal code, hence the name.

The perpetrator sends out mass e-mail claiming to be a bank officer or government official who needs help sneaking some money out of the country and wants to use someone else's bank account. In return, the victim will get thousands or millions of dollars.

What actually happens is that the victim's bank account is emptied, or the victim's information is used for further fraud. Some victims have even been lured into traveling overseas without proper visas so that they could be trapped and blackmailed.

The 419 scam is so common that many active Internet users receive more than one solicitation per day. Newer versions of the scam no longer mention Nigeria, and many of them claim to offer lottery winnings, inheritances, or business deals.

See also SPAM; COMPUTER ETHICS.

486 an Intel microprocessor similar to the 386 but faster; predecessor of the Pentium. *See* MICROPROCESSOR

TABLE 1
IEEE 802.11 STANDARDS FOR WIRELESS NETWORKING

<i>Specification</i>	<i>Popular name</i>	<i>Frequency</i>	<i>Speed</i>	<i>Compatible with</i>
802.11a	Wireless-A	5 GHz	54 Mbps	Wireless-A
802.11b	Wireless-B	2.4 GHz	11 Mbps	Wireless-B
802.11g	Wireless-G	2.4 GHz	54 Mbps	Wireless-B, -G
802.11n	Wireless-N	2.4 GHz	100 Mbps	Wireless-B, -G, -N