Includes examples and usage notes

1001 COMPUTER WORDS

YOU NEED TO KNOW

THE ULTIMATE GUIDE TO THE LANGUAGE OF COMPUTERS

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PREFACE

This book, *1001 Computer Words You Need to Know*, is part of an Oxford University Press series of concise, helpful guides to the vocabularies of significant fields. We have distilled and enhanced the general dictionary entries (taken from our groundbreaking *New Oxford American Dictionary*) to make useful, browsable books that present the most important words needed to understand a particular topic, selected and updated by recognized experts. By stripping away the words you don't immediately need, we bring these complicated topics into sharper focus.

In addition to these essential 1001 words, we've added explanatory essays about related topics, both serious and light-hearted, and a list of essential web sites for further browsing, making this more than just a dictionary—a truly practical and entertaining all-around guide and reference book.

Erin McKean
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INTRODUCTION

I wrote my first books on a typewriter. I suppose most of you know what those are: odd devices that put letters and words on paper without first encoding them as bits and storing them in memory, on fast spinning metal disks, or on tape. Typewriters have this problem: the text is on paper, and when you edit the text, generally with a red pencil, you have to pay someone to re-type the whole thing, or retype it yourself. The first method is expensive. The second is exquisitely boring.

Thus when, back in the late 70's, I discovered small computers and "word processing" programs it was cause for joy. To my wife's horror I borrowed enough money to get a small computer and a Diablo electric typewriter that would make a printed manuscript from electronic files. If you want to see what all that looked like, my old computer, Ezekiel, is on display in the Hall of Communications and Computers in the Smithsonian Museum of American History in Washington, DC. And that ought to be sufficient to establish my credentials for writing an introduction to this book.

I joined the computer revolution joyfully, because while I don't hate writing, I do hate retyping. When I first started working with computers, I would write a draft of a book or a magazine article on the computer screen and save it to disk (which meant floppy disk in those days). I would then print it out, edit on paper, and then manually type the edited changes into the electronic version of the piece. Then I'd let the computer print out another draft, edit that, enter the changes, etc.,

until I couldn't find anything else to change. I hated to retype things, but old Ezekiel didn't mind at all.

Later I found that was needless work, and now most of my work is done on the computer and submitted electronically, so there is never a paper copy at all. Editing is done on screen, and in fact I seldom read anything I have written without making a few changes here and there.

This all sounds simple, and now it generally is, but it wasn't always simple. Even today there can be technical complications if you don't know what you're doing. It was worse in the early days. Back before the World Wide Web and ubiquitous e-mail, getting a book or an article sent over the wire was very hard to do, and involved working with computer experts. Sometimes it involved language problems as well: in 1983 I had to file a story from Liechtenstein, and I guarantee you that using that Principality's telephone system (which was part of their Post Office) was hideously complex. Actually, I never was able to do it: I printed my 8,000-word column on a tiny little Radio Shack thermal printer which produced a tape two inches wide and many yards long. The tape was sent to the *Byte* editorial offices in Peterborough, New Hampshire by Emory express delivery, and a tech editor had to type all 8,000 words into a word processor. I never was able to look that editor in the eye again. In general, though, I managed to solve most of my technical problems over the years.

Along the way I developed one of Pournelle's Laws: if you don't know what you're doing, work with people who do. In my case this meant working with people who understood computers and computer technology.

And that is an art all by itself.

People who use computers fall into two categories: wizards and the rest of us. The goal of the computer industry executives is to make these machines "user friendly," usable by nearly everyone. The goal of the wizards is to make it impossible to use the machines without hiring wizards as consultants. Since the executives—the suits—have no choice but to employ the

wizards in their efforts to make the machines user friendly, you can see they start with a considerable handicap.

It's not so much that the wizards aren't trying to make things easier; it's that often they can't. They can't explain even comparatively simple operations to outsiders, because the explanation requires them to use technical terms, words that few outside the computer profession understand; so while the operation may look simple, and for the user it may be simple, understanding what's going on is another matter, and it's made more complex by the words the wizards are compelled to use.

Every profession develops a jargon. Automobile mechanics have a jargon, and some of them employ it to intimidate customers. The medical profession has a jargon: when a physician tells you that you have *lumbago,* it sounds much more learned than if he says you have a pain in your lower back. The interesting thing is that *lumbago* means exactly that: a lower backache, which is after all what you just told the doctor. You knew you had a lower backache, even if you didn't know you had lumbago.

Talking to computer experts can produce the same result, only worse. Computer wizards haven't had as long to develop a jargon as the physicians have had, but it's just about as rich, far richer than the jargon of automobile mechanics or plumbers— and it's entirely incomprehensible to most of us.

If you want to know more about the lives of wizards, you can see them at work and play at www.userfriendly.org. You can also see what happens when ordinary users ask for tech support from wizards. Both parties get frustrated. Sometimes there's violence. And look at the cartoon for February 16, 1999 to get an idea of what can happen when a marketing guy—a suit— tries to enter the world of the beards, AKA wizards. It's funny but it's not pretty.

Fortunately, there's help in this book. Studying a book of computer words—learning the jargon—won't make you a wizard. (It may let you fool others into thinking you're a wizard, which is another story.) Most of you don't really want to become wizards. You just want to be able to use your machines,

and when things go wrong, get some help from people who know what they're doing.

And for that there's no substitute for knowing the vocabulary.

You can't ask for help if you can't describe your problem; and you can't get help if you can't understand what the wizard is telling you, and believe me, I have seen both parts of that situation literally thousands of times in the thirty years or so I have been writing about computers.

The way out of those boxes is to learn the jargon. I won't pretend that it's always easy to do that, but some ways are more painful than others. Meanwhile, now that you have this book, you can look up things you don't understand, and find that often they make more sense than you thought. You just need the words.

In addition to the words themselves, there are explanatory sidebars scattered through the book. Use them to get a feel for what the bare words mean. When you're done you won't be a wizard, but you will understand more about this world that has crept up on us and now has taken over. And that is no small thing.

Jerry Pournelle
March, 2004

USING THIS DICTIONARY

The "entry map" below explains the different parts of an entry.

Syllabification

Pronunciation set off with slashes / /

ac•cess /'ækses/ ▶ **n.** the action or process of obtaining or retrieving information stored in a computer's memory: *this prevents unauthorized access or inadvertent deletion of the file.* —— Examples in *italic*

Subsenses signalled by ■

■ the opportunity to use a computer, files, data, etc.: *unauthorized user access.* ■ a way to connect to the Internet: *broadband access.*

▶ **v.** [trans.] (usu. **be accessed**) obtain, examine, or retrieve (data or a file). ＼ Grammar information in square brackets [ ]

USAGE: The verb **access** is standard and common in computing and related terminology, but the word is primarily a noun. Outside computing contexts, its use as a verb in the sense of 'approach or enter a place' is often regarded as nonstandard.

Usage notes provide extra information to help you understand the use or importance of the term.

sleep /slēp/ ▶ **n.** turn off (devices attached to a computer) to reduce power use; hibernate or place on standby.

Phrases section, phrases in **bold face**

PHRASES **put something to sleep** put a computer on standby while it is not being used.

Etymology section

ORIGIN Old English *slēp*, *slǣp* (noun), *slēpan*, *slǣpan* (verb), of Germanic origin; related to Dutch *slapen* and German *schlafen*.

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vir•tu•al /ˈvərCHo͞oəl/ ▸ **adj.** not physically existing, but made by software to appear to do so: *a virtual computer.* See also **VIRTUAL REALITY**.

Derivative section, derivatives in **bold face**

D E R I V A T I V E S **vir•tu•al•i•ty** /ˌvərCHo͞oˈælit̲ē/ **n.**

Cross references in **BOLD SMALL CAPITALS**

Main entries and other boldface forms

Main entries appear in boldface type, as do inflected forms, idioms and phrases, and derivatives. The words PHRASES and DERIVATIVES introduce those elements. Main entries and derivatives of two or more syllables show syllabification with centered dots.

Parts of speech

Each new part of speech is introduced by a small right-facing arrow.

Senses and subsenses

The main sense of each word follows the part of speech and any grammatical information (e.g., [intrans.] before a verb definition). If there are two or more main senses for a word, these are numbered in boldface. Closely related subsenses of each main sense are introduced by a solid black box. In the entry for **access** above, the main sense of "the action or process of obtaining or retrieving information stored in a computer's memory" is followed by a related sense, "the opportunity to use a computer, files, data, etc."

Example sentences

Example sentences are shown in italic typeface; certain common expressions appear in bold italic typeface within examples, as in the entry for **box** above: *broadband access.*

Cross references

Cross references to main entries appear in small capitals. For example, in the entry **virtual** seen previously, a cross reference is given in bold small capitals to the entry for **VIRTUAL REALITY**.

A Note About URLs in This Book

All URLS given in this book should be typed exactly as they appear. Any punctuation necessary for the sentence that is not part of the URL will be in parentheses, such as http://www.safer-networking.org(.) All of the URLs or web addresses given work at the time of publication. If you enter one that cannot be found by your browser, first check your typing! Many of these URLs are difficult to type correctly. If you still get an error message, you can try to enter the URL at http://www.archive.org/(,) a site that periodically archives web pages.

PRONUNCIATION KEY

T his dictionary uses a simple respelling system to show how entries are pronounced, using the following symbols:

æ   *as in* **hat** /hæt/, **fashion** /ˈfæsʜən/, **carry** /ˈkærē/

ā   *as in* **day** /dā/, **rate** /rāt/, **maid** /mād/, **prey** /prā/

ä   *as in* **lot** /lät/, **father** /ˈfäᴛʜər/, **barnyard** /ˈbärnˌyärd/

b   *as in* **big** /big/

ᴄʜ   *as in* **church** /ᴄʜərᴄʜ/, **picture** /ˈpikᴄʜər/

d   *as in* **dog** /dôg/, **bed** /bed/

e   *as in* **men** /men/, **bet** /bet/, **ferry** /ˈferē/

ē   *as in* **feet** /fēt/, **receive** /riˈsēv/

er   *as in* **air** /er/, **care** /ker/

ə   *as in* **about** /əˈbowt/, **soda** /ˈsōdə/, **mother** /ˈməᴛʜər/, **person** /ˈpərsən/

f   *as in* **free** /frē/, **graph** /græf/, **tough** /təf/

g   *as in* **get** /get/, **exist** /igˈzist/, **egg** /eg/

h   *as in* **her** /hər/, **behave** /biˈhāv/

i   *as in* **guild** /gild/, **women** /ˈwimin/

ī   *as in* **time** /tīm/, **fight** /fīt/, **guide** /gīd/, **hire** /hīr/

ir   *as in* **ear** /ir/, **beer** /bir/, **pierce** /pirs/

j   *as in* **judge** /jəj/, **carriage** /ˈkærij/

k   *as in* **kettle** /ˈkeṯl/, **cut** /kət/

l   *as in* **lap** /læp/, **cellar** /ˈselər/, **cradle** /ˈkrādl/

m   *as in* **main** /mān/, **dam** /dæm/

n   *as in* **honor** /ˈänər/, **maiden** /ˈmādn/

ɴɢ   *as in* **sing** /siɴɢ/, **anger** /ˈæɴɢgər/

ō   *as in* **go** /gō/, **promote** /prəˈmōt/

ô   *as in* **law** /lô/, **thought** /ᴛʜôt/, **lore** / lôr/

oi   *as in* **boy** /boi/, **noisy** /ˈnoizē/

o͞o   *as in* **wood** /wo͝od/, **football** /ˈfo͝otˌbôl/, **sure** /sʜo͞or/

o͞o   *as in* **food** /fo͞od/, **music** /ˈmyo͞ozik/

ow   *as in* **mouse** /mows/, **coward** /ˈkowərd/

p   *as in* **put** /po͝ot/, **cap** /kæp/
r   *as in* **run** /rən/, **fur** /fər/, **spirit** /ˈspirit/
s   *as in* **sit** /sit/, **lesson** /ˈlesən/
sʜ   *as in* **shut** /sʜət/, **social** /ˈsōsʜəl/, **action** /ˈæksʜən/
t   *as in* **top** /täp/, **seat** /sēt/
t̠   *as in* **butter** /ˈbət̠ər/, **forty** /ˈfôrt̠ē/, **bottle** /ˈbät̠l/
ᴛʜ   *as in* **thin** /ᴛʜin/, **truth** /tro͞oᴛʜ/
ᴛ̠ʜ   *as in* **then** /ᴛ̠ʜen/, **father** /ˈfäᴛ̠ʜər/
v   *as in* **never** /ˈnevər/, **very** /ˈverē/
w   *as in* **wait** /wāt/, **quick** /kwik/
(h)w   *as in* **when** /(h)wen/, **which** /(h)wiсʜ/
y   *as in* **yet** /yet/, **accuse** /əˈkyo͞oz/
z   *as in* **zipper** /ˈzipər/, **musician** /myo͞oˈzisʜən/
zʜ   *as in* **measure** /ˈmezʜər/, **vision** /ˈvizʜən/

Foreign Sounds

кʜ   *as in* **Bach** /bäкʜ/
ɴ   *as in* **en route** /äɴ ˈro͞ot/, **Rodin** /rōˈdæɴ/
œ   *as in* **hors d'oeuvre** /ôr ˈdœvrə/, **Goethe** /ˈgœtə/
ʏ   *as in* **Lully** /lʏˈlē/, **Utrecht** /ˈʏˌtreкʜt/

Stress marks

Stress marks are placed before the affected syllable. The primary stress mark is a short vertical line above the letters [ˈ] and signifies greater pronunciation emphasis should be placed on that syllable. The secondary stress mark is a short vertical line below the letters [ˌ] and signifies a weaker pronunciation emphasis.

A

ac•cel•er•at•ed graph•ics port /æk'selə,rātid 'græfiks ,pôrt/ ▸ **n.** see **AGP**.

ac•cel•er•a•tor board /æk'selə,rātər ,bôrd/ (also **ac•cel•er•a•tor card**) ▸ **n.** an accessory circuit board that can be plugged into a desktop computer to increase the speed of its processor or in-put/output operations.

ac•cess /'ækses/ ▸ **n.** the action or process of obtaining or retrieving information stored in a computer's memory: *this prevents un-authorized access or inadvertent deletion of the file.*

■ the opportunity to use a computer, files, data, etc.: *unauthorized user access.* ■ a way to connect to the Internet: *broadband access.*

▸ **v.** [trans.] (usu. **be accessed**) obtain, examine, or retrieve (data or a file).

USAGE: The verb **access** is standard and common in computing and related terminology, but the word is primarily a noun. Outside computing contexts, its use as a verb in the sense of 'approach or enter a place' is often regarded as nonstandard.

ac•cess con•trol list /'ækses kən,trōl ,list/ (abbr.: **ACL**) ▸ **n.** a func-tion that manages the level of access to a computer directory or file each user of the system has (e.g., view a file, modify data, or exe-cute a program) as set by a system administrator.

ac•cess pro•vid•er /'ækses prə,vīdər/ ▸ **n.** another term for SERVICE PROVIDER.

ac•cess time /'ækses ,tīm/ ▸ **n.** the time taken to retrieve data from storage.

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ac•cu•mu•la•tor /əˈkyo͞omyəˌlā‌tər/ ▸ **n.** a register used to contain the results of an arithmetical or logical operation.

ac•tive ma•trix /ˈæktiv ˈmātriks/ ▸**n.** an LCD display system in which each pixel is individually controlled. Also see **TFT**.

A•da /ˈādə/ ▸ **n.** a high-level computer programming language used esp. in real-time computerized control systems, e.g., for aircraft navigation.

ORIGIN 1980s: from the name of *Ada* Lovelace, the daughter of Lord Byron. She assisted Charles Babbage in developing the first mechanical computer.

ad•bot /ˈædˌbät/ ▸**n.** a computer program that caches advertising on personal computers from an Internet-connected server and then displays the advertising when certain linked programs are being used: *click on the startup tab to view all the things that get loaded when you start Windows, and then uncheck anything that looks like the adbot software.*

add-in /ˈæd ˌin/ ▸ **n.** another term for **ADD-ON**.

add-on /ˈæd ˌän/ (also **add-in**) ▸ n. a printed circuit board, designed to provide an enhancement such as advanced audio or video, that can be inserted into a slot in a computer.

ad•dress /əˈdres; ˈædres/ ▸ **n.** a binary number that identifies a particular location in a data storage system or computer memory.
  ■ an e-mail address. ■ an IP address.

ad•dress•a•ble /əˈdresəbəl/ ▸ **adj.** relating to or denoting a memory unit in which all locations can be separately accessed by a particular program.

ad•dy /ˈædē/ ▸**n.** (pl. **ad•dies**) informal an address, especially an e-mail address: *I just sent a note to you and Jemily from my other addy.*

ADP ▸ **abbr.** automatic data processing.

ADSL ▸ **abbr.** asymmetric (or asynchronous) digital subscriber line, a form of DSL in which data is transmitted downstream, to the user, at a faster rate then it is transmitted upstream, from the user. ADSL is the most commonly used form of DSL available to home users.

ad•ver•game /ˈadvərˌgām/ ▸ **n.** a downloadable or Internet-based computer game that advertises a brand-name product by featuring it as part of the game: *born of desperation and ingenuity, advergames,*

as they are called by marketers, are emerging at a time when Web surfers largely ignore more conventional forms of advertising.

DERIVATIVES **ad•ver•gam•ing n.**

ORIGIN blend of *advertisement* and *game*.

a•gent /ˈājənt/ ▸ **n.** an independently operating computer program, typically one set up to locate specific information on the Internet and deliver it on a regular basis: *in the future, there will be almost as few humans browsing the Net as there are people using libraries today. Agents will be doing that for most of us.*

ag•gre•ga•tor /ˈægrɪˌgātər/ ▸ **n.** an Internet company that collects information about other companies' products and services and distributes it through a single Web site.

AGP ▸ **abbr.** accelerated graphics port, a video graphics technology providing a connection to computer memory that allows 3D graphics to display easily on a computer monitor.

AI ▸ **abbr.** artificial intelligence.

Al•gol /ˈælgôl/ ▸ **n.** one of the early high-level computer programming languages that was devised to carry out scientific calculations.

ORIGIN 1950s: from *algo(rithmic)* + the initial letter of **LANGUAGE**.

a•li•as /ˈālēəs/ ▸ **n.** an alternative name or label that refers to a file, command, address, or other item, and can be used to locate or access it.

ORIGIN late Middle English: from Latin, 'at another time, otherwise.'

a•li•as•ing /ˈālēəsɪNG/ ▸ **n.** in computer graphics, the jagged, or sawtoothed appearance of curved or diagonal lines on a low-resolution monitor.

A-life /ˈā ˌlīf/ ▸ **n.** short for artificial life, the production or action of computer programs or computerized systems that stimulate the characteristics of living organisms: *Not surprisingly, the mimetic potentials of A-life are finding application in the arts, most notably in the emerging field of interactive art.*

al•pha•nu•mer•ic /ˌælfən(y)o͞oˈmerik/ ▸ **adj.** consisting of or using both letters and numerals: *alphanumeric data | an alphanumeric keyboard.*

▸ **n.** a character that is either a letter or a number.

DERIVATIVES **al•pha•nu•mer•i•cal adj.**

ORIGIN 1950s: blend of *alphabetical* and *numerical*.

al•pha test /ˈælfə ˌtest/ ▸ n. a trial of machinery, software, or other products carried out by a developer before a product is made available for beta testing.

▸ v. (**a•lpha-test**) [trans.] subject (a product) to a test of this kind: *a new version of an operating system may be alpha tested at our office.*

Alt /ôlt/ ▸ n. short for **ALT KEY**.

Alt key /ˈôlt ˌkē/ ▸ n. a key on a keyboard that when pressed at the same time as another key gives the second key an alternative function.

ORIGIN late 20th cent.: abbreviation of *alt(ernative) key*.

an•a•log /ˈænlˌôg/ (also **an•a•logue**) ▸ adj. relating to or using signals or information represented by a continuously variable physical quantity such as spatial position or voltage. Often contrasted with **DIGITAL**.

ORIGIN early 19th cent.: from French, from Greek *analogon*, neuter of *analogos* 'proportionate.'

an•a•log-to-dig•it•al con•vert•er /ˈænlˌôg tə ˈdijiṯl kənˈvərṯər/ (abbr.: **ADC**) ▸ n. a device for converting analog signals to digital form.

AND /ænd/ ▸ n. a Boolean operator that evaluates as true if and only if all the arguments are true and otherwise has a value of false. See usage note at **BOOLEAN**.

an•i•ma•tion /ˌænəˈmāSHən/ (also **com•put•er an•i•ma•tion** /kəm ˈpyo͞otər anəˌmāSHən/) ▸ n. the manipulation of electronic images by means of a computer in order to create moving images.

ORIGIN mid 16th cent.: from Latin *animatio(n-)*, from *animare* 'instill with life'

a•non•y•mous FTP /əˈnänəməs ˈef ˌtē ˈpē/ ▸ n. part of the file transfer protocol (FTP) on the Internet that lets anyone log on to an FTP server, using a general username and without a password.

an•ti•a•li•as•ing /ˌæntēˈālēəsiNG; ˌæntī-/ ▸ n. the reduction of jagged edges on diagonal lines in digital images. [often as modifier] *by combining with the antialiasing function, it enables a smooth and high-speed drawing which was not achievable with previous software processing.*

DERIVATIVES **an•ti•a•li•as v.**

an•ti•vi•rus /ˌæntēˈvīrəs/ ▸ **adj.** [attrib.] (of software) designed to detect and destroy computer viruses.

API ▸ **abbr.** application programming interface.

app /æp/ ▸ **n.** short for **APPLICATION**.

ap•plet /ˈæplit/ ▸ **n.** a very small application, esp. a utility program performing one or a few simple functions.

ORIGIN 1990s: blend of **APPLICATION** and -*let.*

ap•pli•ca•tion /ˌæpliˈkāSHən/ ▸ **n.** a program or piece of software designed and written to fulfill a particular purpose of the user: *a database application.*

ORIGIN Middle English: via Old French from Latin *applicatio(n-),* from the verb *applicare.*

ap•pli•ca•tion pro•gram /ˌæpliˈkāSHən ˌprōgram/ ▸ **n.** another term for **APPLICATION**.

ap•pli•ca•tion pro•gram•ming in•ter•face /ˌæpliˈkāSHən ˌprōgræm-iNG ˌintərfās/ ▸ **n.** a system of tools and resources in an operating system, enabling developers to create software applications.

ar•chi•tect /ˈärkiˌtekt/ ▸ **v.** [trans.] (usu. **be architected**) design and make: *few software packages were architected with Ethernet access in mind.*

ORIGIN mid 16th cent.: from French *architecte,* from Italian *architetto,* via Latin from Greek *arkhitektōn,* from *arkhi-* 'chief' + *tektōn* 'builder.'

ar•chi•tec•ture /ˈärkiˌtekCHər/ ▸ **n.** the conceptual structure and logical organization of a computer or computer-based system: *a client/server architecture.*

DERIVATIVES **ar•chi•tec•tur•al** /ˌärkiˈtekCHərəl/ **adj.**; **ar•chi•tec•tur•al•ly adv.**

ORIGIN mid 16th cent.: from Latin *architectura,* from *architectus.*

ar•chive /ˈärkīv/ ▸ **n.** a complete record of the data in part or all of a computer system, stored on an infrequently used medium.

▸ **v.** create an archive of (computer data): [intrans.] *we began archiving in June* | [trans.] *neglecting to archive our files was a costly oversight.*

DERIVATIVES **ar•chi•val** /ärˈkīvəl/ **adj.**

ar•gu•ment /ˈärgyəmənt/ ▸ **n.** a value or address passed to a procedure or function at the time of call.

ar•ith•met•ic log•ic u•nit /ˈariTHˈmetik ˈläjik ˌyo͞oˈnit/ ▸ **n.** a unit in a computer that carries out arithmetic and logical operations.

ar•ti•fi•cial in•tel•li•gence /ˌärt̪əˈfiSHəl inˈtelijəns/ (abbr.: **AI**) ▸ **n.** the theory and development of computer systems able to perform tasks that normally require human intelligence, such as visual perception, speech recognition, decision-making, and translation between languages.

ar•ti•fi•cial life /ˈärt̪əˌfiSHəl ˈlīf/ ▸ **n.** see **A-life.**

ASCII /ˈæskē/ ▸ **n.** a set of digital codes representing letters, numerals, and other symbols, widely used as a standard format in the transfer of text between computers.

ORIGIN acronym from *American Standard Code for Information Interchange.*

ASP ▸ **abbr.** application service provider, a company providing Internet access to software applications that would otherwise have to be installed on individual computers.

as•sem•ble /əˈsembəl/ ▸ **v.** [trans.] translate (a program) from assembly language into machine code.

ORIGIN Middle English: from Old French *asembler,* based on Latin *ad-* 'to' + *simul* 'together.'

as•sem•bler /əˈsemblər/ ▸ **n.** a program for converting instructions written in low-level symbolic code into machine code.

■ another term for ASSEMBLY LANGUAGE.

as•sem•bly /əˈsemblē/ ▸ **n.** [usu. as adjective] the conversion of instructions in low-level code to machine code by an assembler.

ORIGIN Middle English: from Old French *asemblé,* feminine past participle of *asembler* (see ASSEMBLE).

as•sem•bly lan•guage /əˈsemblē ˌlæNGgwidj/ ▸ **n.** a low-level symbolic code converted by an assembler.

as•so•ci•a•tive /əˈsōSH(ē)ətiv/ ▸ **adj.** [attrib.] of or denoting computer storage in which items are identified by content rather than by address.

a•syn•chro•nous /āˈsiNGkrənəs/ ▸ **adj.** of or requiring a form of computer control timing protocol in which a specific operation begins upon receipt of an indication (signal) that the preceding operation has been completed.

DERIVATIVES **a•syn•chro•nous•ly adv.**

at•tach•ment /əˈtaCHmənt/ ▶ **n.** a computer file appended to an e-mail: *the law firm's investigation was expanded a few weeks ago to include whether Stubblefield broke any city policies or copyright laws when he sent an e-mail to city department heads that included an attachment of an MP3 song file.*

au•di•o /ˈôdēˌō/ ▶ **n.** sound, esp. when recorded, transmitted, or reproduced: *the machine can retrieve and play audio from a CD-ROM.*
ORIGIN 1930s: independent usage of *audio-*.

au•then•ti•cate /ôˈTHentiˌkāt/ ▶ **v.** [intrans.] (of a user or process) have one's identity verified.
DERIVATIVES **au•then•ti•ca•tion** /ôˌTHentiˈkāSHən/ **n.**; **au•then•ti•ca•tor** /-ˌkāṯər/ **n.**
ORIGIN early 17th cent.: from medieval Latin *authenticat-* 'established as valid,' from the verb *authenticare*, from late Latin *authenticus* 'genuine.'

au•thor•ing /ˈôTHəriNG/ ▶ **n.** the creation of programs and databases for computer applications such as computer-assisted learning or multimedia products: [as adjective] *an authoring system.*

au•to•com•plete /ˌôtōkəmˈplēt/ ▶ **n.** a software function that gives users the option of completing words or forms by a shorthand method on the basis of what has been typed before: *it would allow me to write plug-ins that hook into the editing process so that features like autocomplete, spell-checking, and other niceties could be added.*
▶ **v.** [trans.] complete (a word or form) in this way.
DERIVATIVES **au•to•com•ple•tion n.** /ˌôtōkəmˈplēSHən/

au•to•dial /ˈôtōˌdī(ə)l/ ▶ **n.** a function of telephonic equipment that allows for automatic dialing of preprogrammed or of randomly selected numbers: *have a telephone with autodial by your bed.*
▶ **v.** (**-dialed**, **-dial•ing**; Brit. **-dialled**, **-dial•ling**) [intrans.] automatically dial a telephone number, with or without human prompting: *the first time I discovered it had autodialed and been on-line for over 2 hours.*

AWK /ôk/ ▶ **n.** a computer programming language used to manipulate large configuration files programmatically.
ORIGIN 1978: from the initials of its creators: Aho, Weinberger, and Kernighan.

AYT ▶ **abbr.** informal (in e-mail or chatrooms) are you there?

B

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back•bone /ˈbækˌbōn/ ▸ **n.** a large transmission line or system for carrying data, that local lines or networks connect to.

back end /ˈbæk ˈend/ ▸ **adj.** [attrib.] denoting a subordinate processor or program, not directly accessed by the user, which performs a specialized function on behalf of a main processor or software system: *a back-end database server.*

back•ground /ˈbækˌgrownd/ ▸ **n.** used to describe tasks or processes running on a computer that do not need input from the user: *programs can be left running in the background* | [as adjective] *background processing.*

back•lit /ˈbækˌlit/ ▸ **adj.** (of a display screen) illuminated from behind: *a backlit LCD screen.*

back•slash /ˈbækˌslæsH/ ▸ **n.** a backward-sloping diagonal line (\), used in computer commands.

back•space /ˈbækˌspās/ ▸ **n.** a key on computer keyboard that causes the cursor to move backward.

▸ **v.** [intrans.] move a computer cursor back one or more spaces.

back•up /ˈbækˌəp/ ▸ **n.** the procedure for making extra copies of data in case the original is lost or damaged: *automatic online backup* | [as adjective] *a backup disk.*

■ a copy of this type.

back up /ˈbæk ˈəp/ ▸ **v. back something up** make a spare copy of data or a disk.

back•ward com•pat•i•ble /ˈbækwərd kəmˈpætəbəl/ (also **back•wards com•pat•i•ble** /-wərdz/) ▸ **adj.** (of computer hardware or software) able to be used with an older piece of hardware or software without special adaptation or modification.

DERIVATIVES **back•ward com•pat•i•bil•i•ty** /kəmˌpætəˈbilitē/ **n.**

band•width /ˈbændˌwidᴛʜ/ ▸ **n.** the data transmission capacity of a computer network or other telecommunication system.

bang /bæNG/ ▸ **n.** the character "!"

ban•ner /ˈbænər/ (also **ban•ner ad** /ˈbænər ˌæd/) ▸ **n.** an advertisement appearing across the top of a web page: *to get a new banner now, click Step 1.* | [as modifier] *advertise and promote your site on thousands of web sites all around the world for free utilizing our award winning banner exchange engine and free web tools!*

BASIC /ˈbāsik/ ▸ **n.** a simple high-level computer programming language that uses familiar English words, designed for beginners and formerly widely used on desktop computers.

O R I G I N 1960s: acronym from *Beginners' All-purpose Symbolic Instruction Code*.

batch /bæCH/ ▸ **n.** a group of records processed as a single unit, usually without input from a user.

batch file /ˈbæCH ˌfīl/ ▸ **n.** a computer file containing a list of instructions to be carried out in turn.

batch proc•ess•ing /ˈbæCH ˌpräsesiNG/ ▸ **n.** the processing of previously collected jobs in a single batch.

baud /bôd/ ▸ **n.** (pl. same or **bauds**) a unit used to express the speed of transmission of electronic signals, corresponding to one information unit or event per second.

■ a unit of data transmission speed for a modem of one bit per second (in fact there is usually more than one bit per event).

O R I G I N 1930s: coined in French from the name of J. M. E. *Baudot* (1845–1903), French engineer who invented a telegraph printing system.

bay /bā/ ▸ **n.** a space in a computer cabinet, into which an electronic device can be installed: *a drive bay.*

O R I G I N late Middle English: from Old French *baie*, from *baer* 'to gape,' from medieval Latin *batare*, of unknown origin.

BBS ▸ **abbr.** bulletin board system.

bcc ▸ **abbr.** blind carbon copy, a copy of an e-mail sent to someone whose name and address isn't visible to other recipients.

bench•mark /ˈbenCHˌmärk/ ▸ **n.** a problem designed to evaluate the performance of a computer system: *Xstones is a graphics benchmark.*

■ a standard or point of reference against which hardware or software may be compared or assessed.

▸ **v.** [trans.] evaluate or check (hardware or software) by comparison with a standard.

■ [intrans.] evaluate or check something in this way: *we continue to benchmark.* ■ [intrans.] show particular results during a benchmark test: *the device should benchmark at between 100 and 150 MHz.*

bench•mark test /ˈbenCHˌmärk ˌtest/ ▸ **n.** a test using a benchmark to evaluate a computer system's performance.

bench test /ˈbenCH ˌtest/ ▸ **n.** a test carried out on a machine, a component, or software before it is released for use, to ensure that it works properly.

▸ **v.** (**bench-test**) [trans.] run a bench test on (something): *they are offering you the chance to bench-test their applications.*

■ [intrans.] give particular results during a bench test: *it bench-tests two times faster than the previous version.*

be•ta test /ˈbātə ˌtest/ ▸ **n.** a trial of machinery, software, or other products, in the final stages of its development, carried out by a party unconnected with its development.

▸ **v.** (**be•ta-test** /ˈbātə ˈtest/) [trans.] subject (a product) to such a test: *we expect to beta test the model during December.*

bi•di•rec•tion•al /ˌbīdiˈreksHənl/ ▸ **adj.** functioning in two directions: *bidirectional audio and video connections.*

big en•di•an /ˈbig ˈendēən/ ▸ see ENDIAN.

bi•na•ry code /ˈbīnərē ˌkōd/ ▸ **n.** a coding system using combinations of the binary digits 0 and 1 to represent a letter, digit, or other character in a computer or other electronic device.

bi•o•com•pu•ter /ˈbīōkəmˌpyo͞oṯər/ ▸ **n.** a computer based on circuits and components formed from biological molecules or structures that would be smaller and faster than an equivalent computer built from semiconductor components.

■ a human being, or the human mind, regarded as a computer.

bi•o•com•put•ing /ˌbīōkəmˈpyo͞otiNG/ ▸ **n.** the design and construction of computers using biochemical components: *while biocomputing includes ways to do rudimentary computing with DNA itself, scientists have begun looking at ways to do computations in whole*

cells by engineering part of the cells' DNA and the machinery controlled by those genes.
■ an approach to programming that seeks to emulate or model biological processes. ■ computing in a biological context or environment.

BIOS /ˈbīōs/ ▶ **n.** a set of computer instructions in firmware that control input and output operations.

ORIGIN acronym from *Basic Input-Output System.*

bit /bit/ ▶ **n.** a unit of information expressed as either a 0 or 1 in binary notation.

ORIGIN 1940s: blend of *binary* and *digit.*

bit•map /ˈbitˌmæp/ ▶ **n.** a representation in which each item corresponds to one or more bits of information, esp. the information used to control the display of a computer screen.

▶ **v.** (**bit•mapped**, **bit•map•ping**) [trans.] represent (an item) as a bitmap.

BITNET /ˈbitˌnet/ (also **Bit•net**) **trademark** a data transmission network founded in 1981 to link North American academic institutions and to interconnect with other information networks.

bleed•ing edge /ˈblēdiNG ˈej/ ▶ **n.** the very forefront of technological development: *a design that many people believe is still too bleeding edge for large mission-critical systems.*

ORIGIN 1980s: on the pattern of *leading edge, cutting edge.*

bloat•ware /ˈblōtˌwe(ə)r/ ▶ **n.** informal software that requires an amount of disk storage space that is grossly incommensurate with its utility: *none of the programs on this page is bloatware, so they can be downloaded fairly quickly.*

BLOB /bläb/ ▶ **n.** binary large object; a stored block of data without reference to the database management system except size and location.

ORIGIN acronym.

blog /bläg/ informal ▶ **n.** a weblog.

▶ **v.** (**blogged**, **blog•ging**) [intrans.] add new material to or regularly update a weblog.

DERIVATIVES **blog•ger n.**

blog•o•sphere /ˈblägəˌsfi(ə)r/ ▶ **n.** the world of weblogs: *the blog's*

dullness was inspired—if that is the correct word—by Mr. Walker's careful study of the blogosphere.

Blue•tooth /'bloo͞o,too͞oTH/ ▸ **trademark** a standard for the short-range wireless interconnection of computers, cell phones, and other electronic devices.

ORIGIN 1990s: said to be named after King Harald *Bluetooth* (910–985), credited with uniting Denmark and Norway, as Bluetooth technology unifies the telecommunications and computing industries.

board /bôrd/ ▸ **n.** a flat insulating sheet used as a mounting for an electronic circuit: [with adjective] *a graphics board.*

■ another term for **EXPANSION CARD**.

ORIGIN Old English *bord*, of Germanic origin; related to Dutch *boord* and German *Bort*; reinforced in Middle English by Old French *bort* 'edge, ship's side' and Old Norse *borth* 'board, table.'

book•mark /'boŏk,märk/ ▸ **v.** [trans.] make a record of (the address of a file, Internet page, etc.) to enable quick access by a user: *its database pool is expected to grow over time, and is well worth bookmarking.*

▸ **n.** any of a collection of Web site addresses saved in a computer file for easy retrieval: *you can access any work instantly from the main menu and designate up to 99 bookmarks.*

Bool•e•an /'boŏolēən/ ▸ **adj.** denoting a system of algebraic notation used to represent logical propositions, esp. in computing and electronics: *a Boolean search.*

▸ **n.** a binary variable, having two possible values called "true" and "false."

ORIGIN mid 19th cent.: from the name of English mathematician G. *Boole + -an.*

USAGE: Using Boolean search operators AND, OR, and NOT can significantly improve the quality of your Web searches. For instance, searching with the two words *unicycle OR juggling* will get you pages where either term is mentioned alone. The search stops looking if it finds either term, so the *unicycle* pages might contain the word *juggling*, and might not. To find only pages where both words are present, use *unicycle AND juggling*. To find only pages about unicycles that don't mention juggling, use *unicycle NOT juggling*.

boot /boot/ ▸ **n.** (also **boot up** /ˈboot ˌəp/) [usu. as adjective] the process of starting a computer and putting it into a state of readiness for operation: *the boot sector of the hard disk is referred to every time the PC is turned on.*

▸ **v.** [trans.] start (a computer) and put it into a state of readiness for operation: *the menu will be ready as soon as you **boot up** your computer* | [intrans.] *the system won't **boot from** the hard drive.*

O R I G I N from **BOOTSTRAP**.

boot•a•ble /ˈbootəbəl/ ▸ **adj.** (of a disk) containing the software required to boot a computer.

boot•strap /ˈbootˌstræp/ ▸ **n.** a technique of loading a program into a computer by means of a few initial instructions that enable the introduction of the rest of the program from an input device.

boot-up /ˈboot ˌəp/ ▸ **n.** see **BOOT**.

bot /bät/ ▸ **n.** an autonomous program on a network (esp. the Internet) that can interact with computer systems or users, esp. one designed to respond or behave like a player in an adventure game.

■ a computer program that behaves like a human user in some specific capacity: *often, a bot looks like any other human user, and you might not be able to tell you're hanging out with software.*

O R I G I N 1980s: shortening of *robot.*

-bot ▸ **combining form** used to form nouns denoting a computer program or robot with a very specific function: *she wanted to direct the female's behavior. She envisioned controlling a robot that could replace the female and fool a male completely. So, she created the fembot.*

box /bäks/ ▸ **n.** informal **1** a personal computer or workstation: *I'm having networking problems where windows boxes can route through my Linux gateway, but my Linux boxes can't.* ■ a casing containing a computer.

2 an area on a computer screen for user input or displaying information: *a dialog box.*

P H R A S E S (**right**) **out of the box** describing a newly purchased product that works immediately, without any special assembly or training: *a completely preconfigured system you can quickly install right out of the box.*

ORIGIN late Old English, probably from late Latin *buxis*, from Latin *pyxis* 'boxwood box,' from Greek *puxos*).

bpi ▶ **abbr.** bits per inch, used to indicate the density of data that can be stored on magnetic tape or similar media.

bps ▶ **abbr.** bits per second.

break•point /ˈbrāk͵point/ ▶ **n.** (also **break point**) a place in a computer program where the sequence of instructions is interrupted, esp. by another program or by the operator.

broad•band /ˈbrôd͵bænd/ ▶ **adj.** of or using signals over a wide range of frequencies in high-capacity telecommunications, esp. as used for access to the Internet: *broadband access.*

▶ **n.** signals over such a range of frequencies: *wireless broadband | the ability to uplink on broadband.*

bro•chure•ware /brōˈsHŏŏr͵we(ə)r/ ▶ **n.** Web sites or Web pages produced by converting a company's printed marketing or advertising material into an Internet format, typically providing little or no opportunity for interactive contact with prospective customers: *certainly the wealth of brochureware on the Internet makes comparison shopping there much easier than physically visiting or even telephoning each vendor.*

brown goods /ˈbrown ͵gŏŏdz/ ▶ **plural n.** computers, television sets, audio equipment, and similar household appliances: *our supply chain needs to accommodate highly perishable products, as well as white and brown goods.*

browse /browz/ ▶ **v.** [trans.] read or survey (data files) stored on a disk drive or a network.

brows•er /ˈbrowzər/ ▶ **n.** a program with a graphical user interface for displaying HTML files, used to navigate the World Wide Web: *a Web browser.*

bub•ble•jet print•er /ˈbəbəl͵jet ͵printər/ ▶ **n.** a kind of inkjet printer.

bud•dy list /ˈbədē ͵list/ ▶ **n.** a list of people who you communicate with over the Internet using instant messaging.

buff•er /ˈbəfər/ ▶ **n.** a temporary memory area or queue used when transferring data between devices or programs operating at different speeds.

bug /bəg/ ▶ **n.** an error in a computer program or system.

bug•gy /ˈbəgē/ ▸ **adj.** (**bug•gi•er**, **bug•gi•est**) (of a computer program or system) faulty in operation.

build /bild/ ▸ **v.** (past and past part. **built** /bilt/) [trans.] (often **be built**) compile (a program, database, index, etc.).
  ■ [intrans.] (of a program, database, index, etc.) be compiled.
▸ **n.** a compiled version of a program.
  ■ the process of compiling a program.

bul•le•tin board /ˈboŏlitn ˌbôrd/ (also **bul•le•tin board sys•tem** /ˈboŏlitn ˌbôrd ˌsistəm/) ▸ **n.** an information storage system designed to permit any authorized computer user to access and add to it. Compare with MESSAGE BOARD.

bun•dle /ˈbəndl/ ▸ **n.** a set of software, hardware, or services sold together.
▸ **v.** [trans.] sell (hardware, software, support services) as a package: *imaging software comes bundled with the scanner.*
  O R I G I N Middle English: perhaps originally from Old English *byndelle* 'a binding,' reinforced by Low German and Dutch *bundel* (to which *byndelle* is related).

burn /bərn/ ▸ **v.** (past and past participle **burned** or **burnt**) [trans.] **1** produce (a compact disc) by copying from an original or master copy. **2** copy data to (a CD or DVD) from a CD, DVD, audio or video file stored on a drive, or other digital source.
  O R I G I N A high-intensity laser is used to heat, or 'burn,' a layer of dye within the disk to create the copy.

burn•er /ˈbərnər/ ▸ **n.** a drive for encoding a compact disc or DVD by creating nonreflective areas on the disk with a high-intensity laser.

burn•out /ˈbərnˌowt/ ▸ **n.** failure of an electrical device or component through overheating: [with adjective] *that brand of monitor is prone to pixel burnout.*

bus /bəs/ ▸ **n.** (pl. **bus•es** or **bus•ses**) a distinct set of conductors carrying data and control signals within a computer system, to which pieces of equipment may be connected.

byte /bīt/ ▸ **n.** a group of binary digits or bits (usually eight) operated on as a unit. Compare with BIT.
  ■ such a group as a unit of memory size.
  O R I G I N 1960s: an arbitrary formation based on *bit* and *bite*.