GLOSSARY

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. Special filename for the current directory. See also *current directory*.

.. Special filename for the directory "one step closer to / from here."

Aqua The graphical user interface used in Mac OS X.

argument A piece of information passed to a command, function, or method. An argument usually tells a command what to act upon. For example, in the command line

```
ls -l /etc
```

-l is an option and /etc is an argument. See also *option*.

CGI (Common Gateway Interface) A set of rules that describe how a Web server communicates with another piece of software (the CGI program) on the same machine, and how the other piece of software talks to the Web server. Any piece of software can be a CGI program if it handles input and output according to the CGI standard.

client A software program used to contact and obtain data from a server software program on another computer, often across a network. Each client program is designed to work with one or more specific kinds of server programs, and each server requires a specific kind of client. A Web browser is a specific kind of client. See also *server*.

command line A written instruction given to a computer. A Unix command line always begins a specific command and may also contain modifers for the command (called "options") and/or a list of things for the command to act upon (called "arguments").

comment, comment out *Comment* refers to text included solely for the benefit of humans in a file that is read by a computer program. Comments never affect the execution of the program that reads them—they are skipped. To *comment out* a chunk of code in a computer program or configuration file means to turn it into a comment, usually by adding the appropriate characters to the code so that the portion being commented out is no longer executed. See also *uncomment*.

current directory The current location in the file system. This is like the Macintosh concept "Which folder are you in?" See also *directory*.

daemon A program that runs continuously, waiting to be called upon to perform some service. Most server software programs on Unix systems run as daemons, and so they often have command names ending in "d" for *daemon*, for example, ftpd is the daemon that provides the FTP service. See also *FTP*.

Darwin The specific version of Unix that forms the foundation of Mac OS X. Darwin is a variant of an earlier version of Unix called FreeBSD.

directory The Unix name for what Mac users call a "folder." In Unix, a directory is a special kind of file that contains the names of the files (and directories) that are "inside" it.

DNS (Domain Name System) The entire system of servers and software that associate domain names, such as www.peachpit.com, with IP addresses, such as 165.193.123.104. See also *IP address*.

domain name The unique name that identifies an Internet site. Domain names always have two or more parts, separated by dots. The part on the left is the most specific, and the part on the right is the most general. A given machine may have more than one domain name, but a given domain name points to only one machine. For example, the domain names

matisse.net

mail.matisse.net

workshop.matisse.net

might all refer to the same machine, but each domain name can refer to no more than one machine.

Usually, all of the machines on a given network will have the same right-hand portion of their domain name (matisse.net in the examples above). It is also possible for a domain name to exist but not be connected to an actual machine. This is often done so that a group or business can have an Internet email address without having to establish a real Internet site. In these cases, a real Internet machine must handle the mail on behalf of the listed domain name.

escape To remove the special meaning from a character in a string of text. For example, the space character has a special meaning on the Unix command line. It is used to separate the parts of the command line, so a command line like this:

```
ls My Projects
```

would normally be interpreted as having three parts. If you are trying to list the contents of a directory called My Projects, then you can fix the problem by escaping the space with the \ character:

```
ls My\ Projects
```

Now the `ls` command is passed only one argument instead of two.

FAQ (Frequently Asked Questions) FAQs are documents that list and answer the most common questions on a particular subject. There are hundreds of FAQs on subjects as diverse as pet grooming and cryptography. FAQs are usually written by people who have tired of answering the same question over and over.

filesystem, file system A *filesystem* is a single partition of a disk. On the other hand, *file system* correctly refers to the entire logical structure of all the disk space available to the user. For example, "Making backups of your entire file system is important." See also *partition*.

firewall A system designed to separate a network into two or more parts in order to reduce to a strictly controlled list the kinds of connections that can occur between the two parts.

flag See *option*.

FQDN (fully qualified domain name) A domain name that contains all the parts needed to translate it into an IP address. Top-level domain names such as ".com" are never FQDNs. In common usage, people say "domain name" when what they mean is "fully qualified domain name."

FTP (File Transfer Protocol) A common method of moving files between two Internet sites.

FTP is a way to log in to another Internet site in order to retrieve and/or send files. Many Internet sites have established publicly accessible repositories of material that can be obtained using FTP by logging in with the account name "anonymous"; these sites are called *anonymous FTP servers*.

FTP was invented and used prevalently long before the advent of the World Wide Web, and originally it was always used from a text-only interface.

host Any computer on a network that is a repository for services available to other computers on the network. It is quite common to have one host machine provide several services, such as SMTP (email) and HTTP (Web).

HTTP (Hypertext Transfer Protocol)
The protocol for moving hypertext files across the Internet. Requires an HTTP client program on one end (such as a browser) and an HTTP server program on the other end. HTTP is the most important protocol used on the World Wide Web.

hypertext Generally, any text that contains links to other documents—words or phrases in the document that, when selected, cause another document to be retrieved and displayed. See also *HTTP*.

IMAP (Internet Message Access Protocol)
IMAP is gradually replacing POP as the main protocol used by email clients in communicating with email servers. Using IMAP, an email client program not only can retrieve email but also can manipulate messages stored on the server, without having to actually retrieve them. Users can delete messages or change their status, or manage multiple mail boxes. See also *POP*.

Internet Evolved from the ARPANET of the late '60s and early '70s, the Internet is a global collection of tens of thousands of networks that are connected using the TCP/IP protocols. It is undoubtedly the largest wide area network (WAN) in the world. See also *network*.

IP (Internet Protocol) address Also called an *IP number*. A unique number consisting of four parts separated by dots—for example:

165.113.245.2

Every machine on the Internet has a unique IP address. If a machine does not have an IP address, it is not connected to the Internet. Many machines (especially servers) also have one or more domain names that are easier for people to remember. See also *domain name*.

Linux A widely used open-source Unix-like operating system. Linux was first released by its inventor, Linus Torvalds, in 1991. There are versions of Linux for almost every available type of computer hardware, from desktop machines to IBM mainframes. The inner workings of Linux are open and available for anyone to examine and change as long as the changes are available to the public. This has resulted in thousands of people working on various aspects of Linux and adaptation of Linux for a huge variety of purposes, from servers to TV-recording boxes. See also *open-source software*.

log-in, log in As a noun *(log-in):* The account name used to gain access to a computer system. Not a secret (in contrast to *password*). As a verb *(log in):* The act of connecting to a computer system by giving your credentials (usually your user name and password). See also *password, user name*.

network Any time you connect two or more computers together so that they can share resources, you have a computer network. Connect two or more networks together and you have an internetwork. The Internet is the world's largest internetwork. See also *Internet*.

open-source software Software for which the underlying programming code is available to users so that they may read it, make changes to it, and build new versions of the software incorporating their changes. There are many types of open-source software, mainly differing in the licensing terms under which altered copies of the source code may (or must be) redistributed.

operator As part of a command line, an operator is a character such as > or & that alters the behavior of the entire command line. For example, the >, or *redirect,* operator takes whatever input it receives (from the commands on its left) and redirects them into the file whose name appears on its right:

```
ls -l /etc/ > output.txt
```

option Also called a *flag* or a *switch,* an option is a piece of information passed to a command that turns on or off a behavior of that command. For example, in the command line

```
ls -l /etc
```

the -l option tells the ls command to produce the "long-format" listing. (Frequently, but not always, the option name works as an abbreviation of the action.) See also *switch*.

partition As a noun: A portion of a disk configured to be used by the operating system as if it were a physically separate disk. All disks have at least one partition (which can be the full size of the disk). The Macintosh concept of "volume" is the same as a partition. As a verb: The act and process of creating a partition. For example, "You must partition the disk before you can use any of the partitions."

password A code used to gain access (log in) to a locked system. Good passwords contain letters and nonletters, and are not simple combinations, such as "virtue7." A good password might be "5%df(29)." But don't use that one! See also *log in* and *user name*.

path The location of a file in the file system. Paths may be *full* or *relative*. A full path always begins with / and gives the exact location of the file in the file system, showing all the directories in the path. For example,

```
/Users/vanilla/Music/lyrics.txt
```

A relative path never begins with /, and it gives the location of a file relative to the current directory. The special filenames . and .. are often used in relative paths, such as

```
../Music/lyrics.txt
```

See also . , .. , *filename*, and *file system*.

pipe The | operator is used in command lines to pass the output of a command as input to another command. This is called "piping the output" into the other command. For example,

```
grep ipfw /var/log/system.log | grep Deny
```

The output of the first grep command is "piped into" a second grep command. See also *operator*.

POP (Post Office Protocol) Post Office Protocol refers to a way that email client software, such as Eudora, gets mail from a mail server. When you obtain an account from an Internet service provider, you almost always get a POP account with it, and it is this POP account that you tell your email software to use to get your mail. Another protocol, called IMAP, is replacing POP for email. See also *IMAP*.

port Every service on an Internet server listens on a particular port number on that server. Most services have standard port numbers; for instance, Web servers normally listen on port 80. See also *server*.

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redirect To change where the output of a command goes or where its input comes from. For example, the input redirect operator (<) changes where a command gets its input.

```
mail hello@dolly.com < message.txt
```

causes the `mail` command to take its input from the file message.txt, and the output redirect operator (>) changes where a command's output goes. For example,

```
grep sudo /var/log/system.log > fishy.txt
```

causes the output of the `grep` command to be redirected into the file fishy.txt. See also *operator.*

server A computer or a software package that provides a specific kind of service to client software running on other computers. The term can refer to a particular piece of software, such as a Web server, or to the machine on which the software is running. For example, "Our mail server is down today—that's why email isn't getting out."

A single server machine can (and often does) have several different server software packages running on it, thus providing many different servers to clients on the network. See also *client* and *network.*

shell A program that provides a (usually text-only) interface to a user, interpreting commands, passing them to the operating system, and displaying the commands' output. Although the term technically can apply to some graphical interfaces, it is commonly used to mean a command-line interface. See also *command line* and *shell prompt.*

shell prompt The text presented to the user by a shell when it is ready and waiting for input. See also *shell.*

switch See *option.*

uncomment To reverse the process of commenting-out code. See also *comment.*

Unix The general name for the family of computer operating systems that have evolved from the work of Dennis Ritchie. Ken Thompson, et al. in 1969-70. Unix was designed from the start as an environment for collaborative computing and is inherently suited to use by multiple, simultaneous users running multiple programs.

unpack An informal term usually meaning to extract the contents of a compressed archive of files, as with the `tar` command.

user name The name used to identify a user on a multi-user operating system like Unix. Mac OS X documentation sometimes means a user's full name when it says "user name" and sometimes means the user's shorter "short user name". In Mac OS X a user's "short user name" is in fact his or her Unix user name —all lower-case and without spaces. See also *log-in* and *password.*

XML (Extensible Markup Language) A specification for the creation of Web-ready data structures. Data stored in a format defined according to the XML standard is very easy for a computer to read, even if it is very complex.