
Dictionary of Computer and Internet Terms

Tenth Edition

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F

F keys *see* FUNCTION KEYS.

f-ratio the focal length of a lens divided by the clear aperture (diameter) through which light enters. The adjustment for f-ratio is called the F-STOP.

The f-ratio determines the brightness of the image formed by the lens; lower f-ratios produce brighter images. Thus, a camera with an $f/1.8$ lens requires much less light to take a picture than a camera with an $f/8$ lens, even with the same film or electronic image sensor.

The brightness of the image is inversely proportional to the square of the f-ratio. That is why f-stops on lenses are often numbered as powers of $\sqrt{2}$: $f/2$, 2.8, 4, 5.6, 8, and so on. Each f-stop gives half as bright an image as the next larger (lower-numbered) one.

To increase or decrease exposure n “stops” means to increase it or decrease it by 2^n . Thus a one-stop decrease means to cut the exposure in half, and a two-stop decrease means to cut it to $1/4$ of its original value.

The rated f-ratio of a lens refers to its widest opening; smaller openings (higher f-ratios) are provided as an automatic or manual adjustment. The actual front glass element is much larger than the opening that the light must pass through. The f-ratio of a ZOOM lens generally varies as the focal length is changed.

See also A; DEPTH OF FIELD; EV; FOCAL LENGTH; P; S; TV.

f-stop the adjustment for selecting the F-RATIO of a lens. Choose a smaller aperture (higher-numbered f-stop) for greater DEPTH OF FIELD.

fabric network interconnections.

Facebook a social networking site (www.facebook.com). Because Facebook was originally restricted to school campuses, it is the most popular service with students.

facsimile *see* FAX.

factorial the product of all the integers from 1 up to a specified number. The factorial of a number n is symbolized by an exclamation point: $n!$. For example:

$$\begin{array}{ll} 2! = 2 \times 1 & = 2 \\ 3! = 3 \times 2 \times 1 & = 6 \\ 4! = 4 \times 3 \times 2 \times 1 & = 24 \\ 5! = 5 \times 4 \times 3 \times 2 \times 1 & = 120 \end{array}$$

fade *see* TRANSITION EFFECT.

fair use in copyright law, a limited kind of use of copyrighted material that does not require the copyright holder’s permission. For example, quoting a few sentences from a book and acknowledging the source is fair use.

systems but does not support routing. *See* PROTOCOL; ROUTER. *Contrast* ATM; IPX/SPX; TCP/IP.

NetBIOS (Network Basic Input-Output System) an operating system extension designed by IBM to allow software to access a network. NetBIOS includes a network protocol that was later extended to form NetBEUI. *See* NETBEUI; PROTOCOL.

netcafe an INTERNET CAFE.

netcam a camera attached to a computer, used to send images over a network. *Compare* WEBCAM. Physically, webcams and netcams are alike; the difference is in how they are used.

netiquette (network etiquette) the conventional practices that make the INTERNET usable. More than just politeness, netiquette involves fundamental respect for the rights of other users who are helping pay the cost of running the network.

For example, it is unacceptable to post off-topic material in NEWS-GROUPS, be rude during chats, ask people to do your homework for you, or bother them with commercial solicitations. *See also* ACCEPTABLE-USE POLICY; COMPUTER ETHICS; NEWSGROUPS.

netizen (Internet citizen) a person who is part of the Internet community in CYBERSPACE.

Netscape Navigator a pioneering WEB BROWSER, produced by Netscape Communications Corporation (see their web site at *netscape.aol.com*). In 1998 Netscape was acquired by AOL.

network a set of computers connected together. *See* INTERNET; INTRANET; LOCAL-AREA NETWORK; WIDE-AREA NETWORK.

network address translation (NAT) the automatic changing of IP addresses by a router or gateway so that several computers can share a single IP address visible to the outside world. This is commonly done in home networks, where the DSL or cable modem has a single IP address. This is a solution to the problem that only about 3 billion IPv4 addresses exist, which is not enough for all the computers in the world.

The router changes the IP addresses on the data packets as they come in and go out so that each computer can communicate with the Internet. By varying port numbers, it ensures that incoming packets can be matched up with the computers for which they are intended. *See also* PIX.

network attached storage file storage that resides on a separate computer, which owns and manages the files. *See* FILE SHARING. *Contrast* DISK SHARING; STORAGE AREA NETWORK.

Network Solutions, Inc. the organization that, until 1998, had sole responsibility for maintaining the registry of top-level domain names (TLDs) ending in *.com*, *.net*, and *.org*, under a contract with the United States Government. Its web address is *www.networksolutions.com*.