Digital Jargon

ADDITIVE PRIMARY COLORS (RGB)
Red, green and blue are the three colors used to create all other colors when direct or transmitted light is used (for example, on a computer monitor). They are called additive primaries, because when pure red, green, and blue are superimposed on one another, they create white.

ALGORITHM
A mathematical expression that employs formulas to accomplish a specific task. Software engineers design algorithms to establish correct color balance, compress images, etc.

ANALOG
In the field of electronics, it refers to a signal that varies regularly and continuously over its range.

ANTI-ALIAS
An algorithm to smooth the appearance of the jagged lines “jaggies” created by the limited resolution of a graphic display system. Aliasing is caused by insufficient sampling of a digital signal.

APPLICATION (OR APPLICATION PROGRAM)
A software program that performs a specific task. Some common types of applications are word processing, page layout, spreadsheet, database management, or graphics programs.

ASCII
Acronym for American Standard Code for Information Interchange (pronounced “ASK-ee”). A standard that assigns a unique binary number to each text character and control character. ASCII is one of the most basic methods for representing text inside a computer and for transferring text between computers or between a computer and a peripheral device. ASCII is a convenient way to transfer files written in one program to a computer running a different program. ASCII files are sometimes also referred to as “text files.”

BACKUP
A copy of a disk, file or a program on a disk that can be used if the original is destroyed.

BBS: BULLETIN BOARD SYSTEM
Usually it is a single computer, accessed by modem, that contains data, messages, documents, etc., that can be retrieved and exchanged by those granted access to the system. (Many are one-person operations run by a volunteer.) Functioning like a post office, it is maintained by an operator to regularly answer queries, initiate new files, clean out dead ones and organize a digital library.

BINARY SYSTEM
A numerical system that uses only 0 and 1 as digits.

BIT
The smallest possible unit of information in any digital system expressed either as 0 or 1. (short for binary digit)

BOOTING (OR STARTING UP)
Starting up a computer by loading an operating system. Rebooting or warm booting means starting over while the computer is already on (for PC’s - Ctrl + Alt + Del). This only starts over the software but leaves the hardware running, which is much less confusing for the machine and also reduces the wear and tear.

BRIGHTNESS
One of the three dimensions of color; the other two are hue and saturation. The term is used to describe differences in the intensity of light reflected from or transmitted through an image independent of its hue and saturation.

BYTE
A unit of binary information consisting of eight bits. One Byte represents one character or number.

CAPTION
Text that appears below a printed image.

CARTRIDGE DRIVE
A drive that uses a removable hard disk called cartridge. Most common ones are SyQuest and Bernoulli.

CD-ROM
Acronym for compact disc read-only memory; a compact disc 120 mm (4.72 inches) in diameter that can store more than 500 MB of information. The information is designated as read-only memory because a CD drive can read the information but cannot record new information on the disc.

CHARGE-COUPLED DEVICE (CCD)
A semiconductor device that produces an electrical output proportional to the amount of light striking each of its elements. A CCD is the principal imaging sensor in electronic cameras, scanners, and video cameras.

CLIP ART (NOW ALSO CALLED "CLICK ART")
Photographs, cartoons, line drawings and graphic illustrations that exist in digital form and are compiled on floppy disks (or CD discs). These images can be copied from the disk and pasted into a document. The term comes from the time when graphic artists, using scissors, clipped pictures out of books designed for this purpose and used them in their designs.

CLIPBOARD
The area in the computer's memory that holds what you last cut or copied (text or image). When paste is applied the information is retrieved from the clipboard.

CLONE (OR IBM CLONE OR JUST PC)
A machine that is compatible with the IBM Personal Computer but is not made by IBM.

COLOR CORRECTION
The process of changing the color balance of an image (or portions of an image) to more closely approach the desired values.

COLOR SEPARATION
The process of separating a color image in a computer (usually in RGB color space) into a series of single-color images (usually CMYK). Because color printing is done by combining three single-color images and black, color pictures and drawings must first be made into separate images for each of these color inks.

COMPATIBLE
Applications are normally written to run on specific types of computer operating systems. Those that are able to run on a particular computer system are said to be "compatible" with that computer.

COMPRESSION
A digital process that allows a data file to be condensed usually by removing certain discrete data that are not necessary for adequate representation. This allows the file to be more efficiently stored or transmitted. In some instances a file is decompressed and restored. (JPEG is one of the most common formats for 24-bit images. It selectively reduces chrominance as opposed to luminance information. The human eye is less likely to detect this loss of data.)

CONTINUOUS TONE
An image that has shades of gray or color (as opposed to a halftone or bit-map image).

CONTRAST
The tonal gradation between the highlights, midtones, and shadows in an image.

CPU (PRONOUNCED AS SEPARATE LETTERS)
Central Processing Unit is the central part of a computer. It includes circuitry (built around the CPU chip and mounted on motherboard) that actually performs the computer's calculations, and the box in which that circuitry is housed.

CPU CHIP
The brain of the computer; the main processor chip that actually does the computing. The CPU chip is the primary determinant of what software will run on that particular computer and determines how fast the computer will run. IBM compatible chips are made by Intel and Macintosh chips are made by Motorola.

CRASH
An unfortunate event when your computer has stopped responding. Do not turn the power off, but use CTRL + Alt + Del on IBM compatibles and the reset button on Macintosh.

CROP MARKS
The marks that are printed near the edges of an image to indicate where the image is to be trimmed.

DESKTOP ENVIRONMENT
Typical of, but not exclusive to, the Macintosh. It is an operation in which a set of program features attempts to mimic the way people work at an office desk. Commands appear as options in pull-down menus, and material being worked on appears in areas of the screen called windows. The user selects commands or other material by using the mouse or other selector device to move a pointer around on the screen. (The earlier MS-DOS operating system required the use of series of keyboard instructions to issue commands.)

DESKTOP PUBLISHING
Initially a system that provided the ability to produce “publication quality” documents on equipment that fit on the top of an office desk. In 1985, when the phrase was coined, the publication was often a newsletter. In the ensuing years, the definition of quality changed as did the sophistication of PC’s. Major elements of newspapers and magazines are now produced using desktop publishing (DTP) technology but the peripherals required for publication quality can no longer fit on a desktop, or in a typical office cubicle.

DIGITAL
A process that can be represented in a discrete (noncontinuous) form, such as numerical digits or integers.

DISK
The medium upon which digital data is recorded and stored. A magnetic material is bonded to a supporting structure similar to audio recording. The disk spins at high speed when placed in the computer’s disk drive and the information is recorded in tracks.

DOCUMENT (SEE FILE)

DOS
The operating system for IBM and compatible machines. When IBM created its PC, it engaged a small software company called Microsoft to write the code for its operating system. Initially called MS-DOS, Microsoft’s Disk Operating System drove the IBM PC XT and AT Computer. With the IBM PC’s success, and later that of clones by other manufacturers, the Dos system came to be the dominant system among PC users.

DPI
Dots per inch; a measure of resolution.

DOT-MATRIX PRINTER
A printer that forms characters with patterns of dots produced by tiny striker wires.

EIGHT-BIT COLOR
Said of images in which each pixel has eight bits of information assigned to it. Eight-bit color can produce 256 colors or shades of gray. (compare to 24-bit color)

E-MAIL
electronic mail, messages sent from one computer to another via telephone lines.

EMULSION
The photosensitive layer on a piece of film or paper.

EPS
Encapsulated PostScript - a standard graphics format that consists of the PostScript code that tells the printer how to print the image and a PICT image that tells the screen how to display it.

FACSIMILE (FAX) MACHINE
A machine that can scan a page and then transmit an image of the page over telephone lines; a receiving fax machine prints a copy of the original page. The fax machine compresses the data to facilitate transmission time and, as a result, transmits only very low resolution image, typically measured at 200 dots per inch.

FILE
Specific information that has been gathered in one place, named and stored on a disk. In a graphical environment such as the Macintosh the file is represented by a small graphic icon that resembles a file folder and carries its name next to it. In a DOS system a file is given a more cryptic code name by the creator (there is a limit of eight characters).

FILTER
A program or “mask” that alters data in accordance with specific criteria, a formula, or an algorithm.

FLICKER
A visible fluctuation in the brightness of a screen image, often bothersome to viewers over prolonged periods . Flicker typically occurs when the vertical scan rate(also called refresh rate) of the monitor is lower than 50 Hz.

FLOPPY DISK
The original disk for the PC was made of flexible plastic with a thin, flexible plastic jacket. These 5 1/4 disks could be easily bent, hence the term “floppy. With the introduction of 3 1/2- inch diskettes, while the disk itself was flexible, its jacket was made of hard plastic. Both kinds, however, are still called floppy disks.

GIGABYTE (GB)
A unit of measurement equal to 1,024 megabytes. Typically, a storage device capable of holding a gigabyte or more of information is a mass storage device using digital tape or large magneto-optical platters.

GRAPHICAL USER INTERFACE
An interface that translates computer codes into user-friendly graphic icons. Macintosh computers have always been utilizing such a system. Recently Microsoft released a similar interface for the DOS machines called Windows.

GRAYSCALE
A single-channel image consisting of up to 256 levels of gray, with 8 bits of color information per pixel.

HACKER
Someone who enjoys fooling around with computers in a technological way, programming them and/or doing sophisticated things to the software.

HALFTONE
The reproduction of a continuous-tone image, which is made by using a screen that breaks the image into various size dots.

HARD COPY
Information printed on a tangible medium such as paper, as opposed to being stored in software code on disk.

HARD DISK
A disk made of metal and sealed in a drive or cartridge. A hard disk can store very large amounts of information compared to 3 1/2-inch or 5 1/4-inch floppy disks

HARDWARE
The devices that process, display and output computer data.

HERTZ (HZ)
The unit of frequency of vibration or oscillation, defined as the number of cycles per second. Named for the physicist Heinrich Hertz.

HISTOGRAM
A graphic representation of the number of pixels with given color values. A histogram shows the breakdown of colors in an image.

HUE
The main attribute of a color that distinguishes it from other colors. Red, blue, green, yellow, etc. are hues. White, black and gray are not considered hues.

INDEXED COLOR IMAGE
A single-channel image, with 8 bits of color information per pixel. The index is a color lookup table containing up to 256 colors.

INKJET PRINTER
A printer that forms characters of images by squirting tiny drops of ink onto paper.

INPUT
Information transferred into a computer from some external source, such as the keyboard, mouse, digitizing pad, a disk drive, or a modem.

JAGGIES
A colloquial term for the jagged edges formed on diagonal lines of a raster image, typically large type fonts, when displayed on a device of limited resolving power. (see anti-alias).

KILOBYTE (K)
A unit of measurement consisting of 1,024 bytes.

LASER PRINTER
A printer that uses laser light to transfer a page image (sent by a computer) onto an electrostatically charged, light-sensitive drum. A black powder, called toner, adheres to the areas of the drum where the laser has drawn the image. Paper then passes over the drum, picking up the toner, and the toner is heat-fused to the paper as it rolls out of the printer.

LEADING
The line spacing for type, measured from baseline to baseline.

LUMINANCE
Brightness, often represented by the letter Y.

MEGABYTE (MB)
A unit of measurement equal to 1,024 kilobytes, or 1,048,576 bytes.

MODEM
An abbreviation for Modulator/ Demodulator; a peripheral device that links a computer to other computers and information services using the telephone.

MOIRE PATTERN
An undesirable pattern in color printing, resulting from incorrect screen angles of overprinting halftones. Moire patterns can be minimized with the use of proper screen angles.

MOUSE
A small hand-operated device that controls the pointer on the screen whose movements correspond to those of the mouse. A rotating ball inside the device moves horizontal and vertical sensors that signal the pointer's direction on the screen. The mouse is used to select operations and give commands.

MULTIMEDIA
Presenting information via a variety of media, including sound, animation, video, text and graphics.

NETWORK
Two or more computers connected to share information.

OBJECT-ORIENTED
Drawing and layout programs that treat graphics as line and arc segments.

OCR
Optical character recognition - the ability of software and/or hardware (scanner, for example) to read text from paper. The resulting text can be edited as text not as an image.

OUTPUT
The product or representation of information that has been transferred from computer software or memory to some external destination such as the display screen, a printer or a modem.

PAINT
Graphics programs that treat images as collections of individual dots or picture elements (pixels).

PALETTE
The collection of colors or shades available to a graphics system or program.

PANTONE, PANTONE MATCHING SYSTEM (PMS)
A brand name for a popular method of specifying the colors of printing papers and inks.

PERIPHERAL DEVICE
A piece of hardware - such as a monitor, scanner, printer, or modem- used in conjunction with a computer and under the computer's control.

PIXEL
A single dot on a computer display or in a digital image. One pixel can contain various amounts of information measured in bits.

PIXELLATION
The occurrence of pixels, large enough to become visible individually, when an image is enlarged. Usually it is the result of insufficient data although it is sometimes used as an effect.

PROCESS COLORS (CMYK)
The four color pigments-cyan, magenta, yellow, and black-used in color printing.

RANDOM-ACCESS MEMORY (RAM)
The part of the computer's memory that stores information temporarily while it is being worked upon.

RASTER
The pattern of parallel lines making up the image on a video display screen. The image is produced by controlling the brightness of successive points of the individual lilies of the raster.

READ-ONLY MEMORY (ROM)
Memory that can be read but not easily modified. Information remains in ROM permanently, even when the computer's power is off.

REGISTRATION MARKS (BULLS-EYES)
Marks that appear on a printed image, generally for CMYK color separations, to help you align the various printing plates.

RESAMPLE
To change the resolution of an image. Resampling down discards pixel information in an image; resampling up adds pixel information through interpolation.

RESOLUTION (SPACIAL RESOLUTION OR SPACIAL RELATIONS)
The number of pixels per inch in an image or the number of dots per inch used by an output device. Resolution can also refer to the number of bits per pixel.

RGB IMAGE
A three-channel image containing a red, green, and blue channel.

SATURATION
The amount of gray in a color. More gray in a color means lower saturation; in a color means higher saturation.

SCANNER
An electronic device that digitizes and converts photographs, slides, paper images, or other two-dimensional images into bitmapped images. A video camera is a scanner that converts three-dimensional objects into digital, bitmapped images.

SCSI
An acronym for Small Computer System Interface (pronounced “SKUH-zee”). An industry standard interface that provides small computers with high-speed access to peripheral devices such as certain kinds of hard disks, printers and optical disks.

SPACIAL RELATIONS
This term refers to the “density” of information, and is measured by the number of pixels per inch. The more pixels per inch the smoother and crisper the image will look. Think of this as if your film format choice (35mm vs. 4”x5”, etc.). If you don’t have a very high DPI you will see “jaggies” and your image may look chunky and pixellated.

SUBTRACTIVE PRIMARY COLORS
Cyan, magenta and yellow, which are the three printing inks that theoretically absorb all color and produce black.

SYSTEM SOFTWARE
The component of a computer system that supports application programs by managing system resources such as memory and 1/0 devices.

TAGGED IMAGE FILE FORMAT (TIFF)
A file format for graphics developed by Aldus, Adobe and Apple that’s particularly suited for representing scanned images and other large bit maps. TIFF is the generally accepted interchange standard for digital images.

TONAL RELATIONS
This terms refers to the color depth in an image. The number of tonal choices you have for each pixel is measured by the number of bits per pixel. Each pixel can only have one assigned value and color, but in a 24-bit image this can be chosen from 16.7 million possibilities. Think of this as if it was your choice of film (Kodalith vs. TriX, etc.)

24-BIT COLOR
Said of images in which each pixel has 24 bits of information. 24-bit color can produce a palette of 16.7 million colors (or shades of gray).

WYSIWYG
Pronounced “whizzywig,” it stands for “What You See Is What You Get,” an expression characterizing page processing and typesetting programs or systems that accurately display on the screen the output from a printer.