Screen Formats

aspect ratio -- The shape of an image or frame, expressed as the width-to-height ratio. Widescreen film uses a 16:9 aspect ratio (1.78:1), whereas standard television uses 4:3 aspect ratio (1.33:1). A DVD disc can store video in either standard or widescreen format. DVD players can automatically format widescreen video for display on standard televisions letterboxing or pan and scan. See also anamorphic, letterbox, Pan and scan.

widescreen -- A wide picture format for film at 16:9 aspect ratio. See also aspect ratio.

4:3 -- Standard aspect ratio used for television; one third wider than it is high (1.33:1). See also aspect ratio.

16:9 -- Widescreen aspect ratio used for film; almost twice as wide as it is high (1.78:1). See also aspect ratio.

letterbox -- A technique used to display a widescreen video image (with a 16:9 aspect ratio) on a standard television display (with a 4:3 aspect ratio). The widescreen image fills the width of the screen, with black bars above and below it. See also aspect ratio, pan and scan.

anamorphic -- A method of storing widescreen video on DVDs. The original 16:9 widescreen image is squeezed horizontally and stored on disc in the standard 4:3 video resolution or typically letterboxed on a standard television monitor, or cropped to 4:3 aspect ratio. The DVD player then stretches it back out to the original aspect ratio for display, either to a widescreen monitor or typically letterboxed on a standard television monitor. See also aspect ratio.

pan and scan -- A technique used to crop a widescreen film (with a 16:9 aspect ratio) to store and display it at standard 4:3 aspect ratio. Instead of just cutting off the two sides of the widescreen image, an operator pans a 4:3 window within the full widescreen frame in order to show the most important speaker or action. See also aspect ratio, letterbox.

split-screen -- A divided display that shows two clips, or portions of clips, side by side.

overscan -- The outer edges of a video image that are typically cut off by consumer television sets in order to ensure that the image fills the entire display. See also safe area.

safe area -- Also known as the safe zone. Margins left around the edge of the image. Used when working with material intended for display on television. Safe margins keep titles from bleeding off the screen. See also overscan.

Video Fundamentals

analog media -- Audio sources, such as audio cassettes and microphones, and video sources, such as VHS and 8mm VCRs and camcorders, that must be digitized and converted into digital format for processing by a computer. Newer digital formats such as DV and DVD have higher resolution and quality than older consumer formats like VHS, and also do not degrade in quality when they are copied from one generation to the next. See also component video, composite video, digital media.

digital media -- Audio and video sources such as audio CD, DV, miniDV, Digital8 camcorders, and DVD that store the audio and video in digital format. As a result, the data can be imported and processed directly by a computer, and copied without any loss from one generation to the next. See also analog media, DV.

VTR -- Video Tape Recorder. Also called VCR (Video Cassette Recorder).

composite video -- A video signal that combines the brightness (luminance or luma) and the color (chrominance or chroma) video information into one signal. Because the signal is not modulated, composite video provides higher quality than RF video. Requires a separate audio signal and connector. Also called Baseband video. See also component video, DV, RF video, S-Video.

component video -- A video signal that separates the video signal into three separate signals (and three separate wires) to avoid any quality loss from mixing signals. The components can be RGB (red, green, and blue); luma (Y) and two chroma signals, such as Y, Y-R, Y-B; or other formats including YUV, YCbCr, or Y Pr Pb. Requires a separate audio signal and connector. See also composite video, DV, RF video, S-Video.

luminance -- The intensity or brightness of a video signal, usually represented by the letter Y. Video signals are split into separate luma and chroma (color) components for higher-quality and more efficient transmission and encoding. In YUV color format, for example, the color information stored in U and V (the color difference signals).

chrominance -- The color of a video signal. Video signals are split into separate luma and chroma (color) components for higher-quality and more efficient transmission and encoding. The chroma signal is typically split into two components or color difference signals, such as YUV format. See also luminance.

RGB -- Acronym for Red, Green, Blue. Full-color video signal format, consisting of three elements. See also YUV.

YUV -- Full-color video signal format, consisting of three elements: Y (luminance), and U and V (chrominance). See also RGB.

field -- For interlaced video sources, a full frame is constructed from alternating odd and even lines from two video fields captured at slightly different times. See also interlaced video.

frames -- The individual video images that make up a moving sequence. Video formats and individual clips are typically described in terms of the resolution of the individual frames, and the frame rate at which they are played. See also frame rate, field.

frame rate -- Playback speed as determined in frames per second (fps). See also sample rate.

progressive video -- Video consisting of complete frames, not interlaced fields. Each individual frame is a coherent image captured by the camera at a single moment in time. See also interlaced video.

progressive scan -- Video display in which the entire screen in refreshed (redrawn) at once. Typically used for computer monitors and high-end video systems. See also interlaced video.

interlaced video -- A technique used for television video formats, such as NTSC and PAL, in which each full frame of video actually consists of alternating lines taken from two separate fields captured at slightly different times. The two fields are then interlaced or interleaved into the alternating odd and even lines of the full video frame. When displayed on television equipment, the alternating fields are displayed in sequence, depending on the field dominance of the source material. See also progressive video.

deinterlace -- To process interlaced television video, in which each frame contains alternating pairs of lines from two separate fields captured at slightly different times. The motion between fields can cause visible tearing when displayed on a computer monitor. Deinterlacing uses every other line from one field and interpolates new in-between lines without tearing. See also interlace, NTSC.

2-3 / 3-2 pulldown -- Process used to convert material from film to interlaced NTSC display rates, from 24 to 30 frames per second. This is done by duplicating fields, 2 from one frame and then 3 from the next frame (or 3 and then 2). Both terms are often used interchangeably to describe the effect. See also inverse telecine.

inverse telecine -- The process used to reverse the effect of 3-2 pulldown, removing the extra fields inserted to stretch 24 frame per second film to 60 field per second interlaced video. See also 2-3/3-2 pulldown.

master -- For video, the original video or audio source, or final video production with analog media, the first tape you create from your PC video file, also known as the first-generation tape. The master tape is a high-quality source to which you should return whenever you want to make more copies. Although you could use the file on your hard drive as a master, you won't want to keep that file forever because it takes up so much storage space. If you're using analog video, however, the PC file is your master source and first generation; the first physical tape you record is considered to be a second-generation tape. See also analog media, DV, digital media.

talking head -- A clip that shows just the head and shoulders of a person who is talking. This tight focus is often used in interview situations where the background is not as important as the talking subject. It is also convenient in a movie destined for the Web because the small amount of movement in a talking-head shot compresses well for the Internet.

freeze frame -- A technique in which a particular frame of video is held onscreen. Sometimes the audio portion of the scene continues playing.

still frame -- A single image or single frame of a video clip. See also freeze frame.

leader -- The beginning of the physical tape on a videocassette or extra material before the beginning of a clip. A tape leader is a strip of nonrecording material that connects the actual recording tape to the spindle on the cassette. Most cassette tapes have about five seconds of leader before the actual recording media portion of the tape begins.

preroll -- To start a tape spinning up to speed before beginning playback or capture to ensure that the operation is synchronized properly.

stripe -- To prepare a new videotape for a recording by prerecording a consistent timecode over the full length of the tape.

dub -- To duplicate or make a copy of a production, traditionally from one tape (usually a master tape) to another tape.

timecode -- An exact time used to identify a specific frame in a clip or production. Measured in hours, minutes, seconds, and frames. See also duration.

synchronize -- To keep two sequences playing at the same rate (in sync). A slide show or a series of video clips can be synced to the beat on an audio track. A talking-head video needs to maintain lip-sync, so that the audio matches the mouth movements of the speaker.

Audio Fundamentals

mono -- Monophonic audio - a single channel of audio. See also stereo.

stereo -- Two-channel audio, with left and right channels. See also mono, surround sound.

narration -- A voice that explains what is happening on a video. Voiceover narration can add tremendous value to a video by explaining the situation being shown to viewers.

sample rate -- The rate at which samples of a continuous signal, such as music or a sound, are captured into a digital representation of the original signal. A higher audio sampling rate, with more samples per second, creates a more accurate representation of the original sound. See also frame rate, Hz.

Hz -- Hertz. A measurement used for audio sampling rate, as in the number of audio samples per second. See also sample rate.

Mic. -- Microphone audio input. See also Line Level.

Line level -- An analog audio connection intended for connecting interconnecting audio equipment, and without the amplification required to connect to speakers. See also Mic.

Analog Video Formats

NTSC -- A television video format used in the United States and elsewhere. Displayed 525 lines of resolution at 60 fields per second, 30 frames per second (actually a fractional value near 29.97). Named for the National Television Standards Committee. See also PAL.

PAL -- Acronym for Phase Alternation Line. A television video format used in Europe and elsewhere. Displayed with 625 lines of resolution at 50 fields per second, 25 frames per second. See also NTSC.

NTSC safe colors -- Colors that are inside the safe region for NTSC television video. Title colors that are outside this range can display badly and bleed on NTSC televisions. See also safe area.

RF video -- Acronym for Radio Frequency. A composite video signal that has been modulated with audio onto a high-frequency radio wave that could be transmitted from an antenna. Typically connected to the antenna input of a TV receiver, and received on channel 3 or 4. The simplest and lowest-quality video signal connection. See also component video, composite video, DV, S-Video.

S-Video -- A video signal that transmits the brightness (luminance or luma) and the color (chrominance or chroma) information separately. Actually uses a single cable, but with two wires in the cable. Because the luma and chroma are separate, S-Video provides higher quality than composite video. Requires a separate audio signal and connector. Also called Y/C, or sometimes (incorrectly) called S-VHS. See also composite video, component video, DV, RF video.

F connector -- A video connector with a thin center wire typically used for antenna connections and RF signals. See also BNC connector, Firewire connector, RCA connector, RF video, S-Video connector.

RCA connector -- A connector with a single central plug, commonly used for audio signals and composite and component video. Also called a phono connector. See also BNC connector, F connector, FireWire connector, S-Video connector.

S-Video connector -- A specialized connector used for S-Video signals. Contains multiple pins for the separate video components. See also BNC connector, F connector, FireWire connector, RCA connector, S-Video.

BNC connector -- A twist-on connector commonly used for higher-end video systems. Used for both analog and digital signals. See also F connector, FireWire connector, RCA connector, S-Video connector.

Digital Video Fundamentals

pixel -- The individual picture elements, or "dots" of color, that are arranged in a two-dimensional array to define a digital image or video frame. The dimensions or resolution of an image are described in terms of the horizontal and vertical pixel count.

resolution -- The dimensions of an image, in pixels, typically expressed as the number of horizontal pixels across and the number of vertical pixels down. See also aspect ratio.

transcode -- To convert from one compression format to another (that is, from DV video from a camcorder to MPEG-2 for DVD). Preferably done intelligently to minimize loss of quality from repeated compression, and not requiring fully decompressing the input and then recompressing to the output.

compress -- To reduce the size of audio or video data through the use of a compression scheme. Also called encode. See also decompress, lossy, and lossless.

decompress -- To process a compressed bitstream and recover the original data (if lossless compression), or an approximation of the original (if lossy compression). Also called decode. See also compress.

lossless -- Any compression scheme, especially for audio and video data, that uses a nondestructive method that retains all the original information, and therefore does not degrade sound or video quality.

lossy -- Any compression scheme, especially for audio and video data, that removes some of the original information in order to significantly reduce the size of the compressed data. Lossy image and audio compression schemes such as JPEG and MP3 try to eliminate information in subtle ways so that the change is barely perceptible, and sound or video quality is not seriously degraded.

perceptual compression -- A compression technique that takes advantage of knowledge of how humans perceive; that is, by eliminating visual detail that the eye cannot easily see or audio frequencies that the ear cannot easily hear.

compressor -- Program by which files are compressed. A compressor that also decompresses files (returns them to their original state) is called a codec. See also compress.

codec -- A video or audio compression component that can both compress and decompress (encode and decode) files. Media formats and players, such as Windows Media, RealMedia, and QuickTime have a selection of codecs built in, and can add additional codecs to support new file formats. See also compression.

Digital Video Formats

DV -- A Digital Video tape and compression format for consumer and professional video equipment. The DV compression format is used for DV and Digital-8 camcorders. DV format video and audio can be captured using a FireWire / IEEE 1394 interface and then saved and edited in a video editor. The consumer tape format is more accurately called mini-DV. See also analog media.

FireWire -- A digital data interface standard that provides a high-speed Plug-and-Play interface for personal computers. Used for connecting DV camcorders to computers, as well as to hard disk drives and DVD drives. Supports up to 480 Mbps data rate. Also known as IEEE 1394 and Sony iLink. See also USB.

FireWire connector -- A roughly rectangular, hot-pluggable connector used for FireWire/IEEE 1394 digital connections, especially digital video signals such as from DV camcorders. The connectors can vary in size: full-size (6-pin) for connecting to a computer or hub, and smaller (4-pin) for connecting to equipment such as DV camcorders. See also BNC connector, DV, F connector, RCA connector, S-Video connector.

USB (Universal Serial Bus) -- A digital data interface standard providing a Plug-and-Play interface for personal computers. Typically used for lower-speed peripherals such as mice, keyboards, printers, and scanners. Also used for interfacing to digital cameras. The existing USB 1 standard provides up to 12Mbps (million bits per second) data rate. The new USB 2 standard supports up to 480Mbps data rate. See also FireWire.

AVI -- Acronym for Audio Video Interleave. The old multimedia file format used under Windows for interleaved video and audio streams. See also Video for Windows, Windows Media.

Video for Windows -- The media file format used with Microsoft Windows (.AVI). Supports many different video and audio compression formats (codecs). See also Windows Media.

Windows Media -- The multimedia platform built into Microsoft Windows, and a series of formats for storing and transmitting video and audio. Uses ASF, WMA, and WMF file types. See also Video for Windows, Windows Media Audio and Windows Media Video.

Windows Media Video (WMV) -- The Microsoft Windows Media format for compressed video and audio files on CD and DVD discs. See also Windows Media Audio.

QuickTime -- Multiplatform, multimedia Movie file format from Apple Computers (.MOV).

RealMedia -- Multiplatform, multimedia Web streaming file format from Real Networks (.RM, .RAM).

streaming media -- Internet video and/or audio clips that can play directly over the Internet, without needing to be downloaded first onto a computer. Used to view and hear broadcasts, and to interactively play and seek in stored clips. See also progressive download.

progressive download -- A technique for downloading Internet video and/or audio clips so that they can be viewed at the same time that they are being transferred to your computer. This provides some of the benefits of streaming media without requiring a special streaming server. See also streaming media.

MPEG -- A family of popular multimedia file formats and associated compression schemes defined by the Moving Pictures Expert Group. MPEG-1 video was designed for use on CD-ROMs and provides picture quality somewhat comparable to VHS. MPEG-2 video was designed for consumer video and is used on DVD, and can provide high-quality full-screen full-rate video with smaller file sizes. MPEG-4 video is designed for a broad range of multimedia applications, and is used for web and wireless streaming video. MP3 is a commonly-used audio compression format, especially for web downloads and portable music players.

MPEG-1 -- An older digital video compression format developed in the early 1990s by the Moving Picture Experts Group. MPEG-1 video was designed for lower-resolution video played from CD-ROM and provides picture quality somewhat comparable to VHS (typically 352x240 resolution). Used for Video CD discs.

MPEG-2 -- A TV-quality digital video compression format developed in the mid-1990s by the Moving Picture Experts Group. MPEG-2 video provides high-quality full-screen full-rate video (720x480 resolution for NTSC) with smaller file sizes than MPEG-1. Used for DVD discs, and also scales to high-definition resolution and bitrates.

MPEG-4 -- A digital multimedia compression format developed in the late 1990s by the Moving Picture Experts Group, that includes video, audio, and interactivity. MPEG-4 video is designed for interactive multimedia across networks, and works well for web and wireless streaming video.

CBR -- Acronym for Constant Bit Rate. A compression scheme in which each unit of input material is always compressed to the same output size. For MPEG-2 video, for example, this means that the compressed data always has the same data rate (that is, bytes per second), even when the input material is very easy to encode. See also VBR.

VBR -- Acronym for Variable Bit Rate. A compression scheme in which each unit of input material can be compressed to different sizes. For MPEG-2 video, for example, this means that "easier" sequences (that is, with no motion) can compress to very small sizes, whereas "hard" sequences (with lots of motion and scene cuts) can compress to much larger sizes. VBR compression can take better advantage of the overall available bandwidth of a video transmission or DVD player by allocating the available bits intelligently to the difficult parts of a sequence. See also CBR.

HDV -- HD on DV - MPEG-2 video in HD resolution

AVCHD -- MPEG-4 AVC in HD

Digital Still Image Formats

BMP -- The standard Windows bitmap still image file format. Bitmap files are not compressed, and are therefore significantly larger than the same image stored in formats such as GIF and JPEG.

GIF -- Acronym for Graphics Interchange Format. A still image file format commonly used on web pages for simple illustrations and animations. Use the JPEG format for photographic images.

JPEG -- A still image file format developed by the Joint Photographic Experts Group that can compress photographic images into much smaller file sizes while sacrificing only a little image quality. Commonly used for photographs on web pages and in e-mail. See also GIF.

PICT -- The standard Apple Macintosh still image Picture file format.

TIFF -- A lossless image file format designed for photographic images that compresses the image size while preserving all the image quality. The resulting files are therefore larger than those with JPEG compression, which sacrifices some detail in order to significantly reduce the image size.

Digital Audio Formats

AIFF -- Acronym for Audio Interchange File Format; Macintosh audio file format. Can be used for uncompressed and compressed data. See also WAV.

MP3 -- An audio file format, especially popular for downloading songs from the web and for storing music in and portable music players. Named for Moving Picture Experts Group (MPEG) 1, Layer 3. Uses lossy compression to significantly reduce file size, but often with little perceptible loss in sound quality. Used to store large song collections on hard disc, download audio to portable audio players, and save multiple hours of music to CD. Some consumer audio players and set-top DVD players can play MP3 audio files stored on CD-R/RW discs. See also WAV, Windows Media Audio.

WAV -- The uncompressed Wave audio file format used with Microsoft Windows. See also AIFF, MP3, WAV, Windows Media Audio.

Windows Media Audio (WMA) -- The Microsoft Windows Media native audio file format. Used for compressing, storing, and organizing CDs and downloaded audio in albums on disk. Also used to download audio to portable audio players. Some consumer audio players and set-top DVD players can play WMA audio files stored on CD-R/RW discs. See also MP3, WAV, Windows Media.

Digital Data Rates

bandwidth -- The amount and rate of data that can be processed or transmitted by a given device. An analog modem has very little bandwidth compared to a high-speed cable modem, for instance, so the former cannot download video from the Internet nearly as quickly as the latter. See also data rate.

data rate -- The speed at which data is transferred, as in bytes per second. Also called bit rate. For example, the speed to download or stream a video file over the Internet, or the speed at which the file must play from a hard disk. When you create a video or audio file, you can specify the target bit rate at which the file will be played. Also called bit rate. See also bandwidth.

bitstream -- A collection of data, as in video or audio data compressed to a file or transmitted between devices.

bit -- A binary digit. The fundamental element of computer logic and numbers. Represents one of two values: zero or one, off or on, false or true. See also byte.

byte -- A data element containing eight bits, or 256 distinct values. Commonly used to store a single text character. Computer data transfer rates are traditionally measured in bits, as in Mb for Megabits (millions of bits, with a lower-case "b"); whereas computer data storage is traditionally measured in bytes, as in MB, for megabytes (millions of bytes, with an upper-case "B"). See also bit, GB, KB, MB.

MB -- Megabytes ( millions of bytes). In computer use, a megabyte actually represents the closest binary power of 2 to a million, or 1024 squared. See also byte, GB, KB.

GB -- Gigabytes (billions of bytes). In computer use, a gigabyte actually represents the closest binary power of 2 to a billion, or 1024 cubed. In general use in advertising DVD disc capacity, however, the number of "GB" is actually used to specify a different value, a billion decimal. See also byte, KB, MB.

Video Editing Fundamentals

rough cut -- A quick assembly of raw clips to approximate the desired final program. As a first step in editing, arranging a collection of clips in the desired order as a storyboard of the production.

storyboard -- In video production, a series of cartoonlike panels drawn to describe a movie, shot by shot. In video editing, an interface that allows you to organize the sequential flow of your production by arranging thumbnails of each video clip. See also Timeline.

scene -- A single video sequence, typically shot in one continuous take. For editing purposes, it is useful to capture or trim your video material so that each scene is stored as an individual clip that can then be edited on the Timeline. See also clip.

clip -- A short piece of video and/or audio, often containing an individual scene. When creating a video project, you import clip files into bins in your project, and often trim longer clips into individual scenes. You then edit the clips together on the Timeline to play in sequential order to tell the "story" of your production, with transitions between clips and other added effects.

channel -- The subcomponents of a clip. For images, an alpha channel can contain a matte or mask image to key certain regions of the image to be transparent. For audio, the separate left and right channels of a stereo clip.

timeline -- In video editing, an interface that allows you to assemble a collection of clips into a production with multiple overlapping tracks. A timeline provides a view of multiple sources being combined over time, with separate tracks for video, audio, and superimposed video, as well as transitions and effects. See also storyboard.

track -- A sequence of video or audio clips in the a video editing timeline that are to be combined and superimposed into a final production.

time ruler -- The time display row along the top of the Timeline, showing the time code along the production. See also edit line.

edit line -- The current editing point in the Timeline, as displayed in the Monitor window and used for inserts and deletes. Often shown by a triangle control in the time ruler with a vertical line down through the Timeline tracks.

jog -- To move slowly through a program, as with frame advance or frame reverse VCR controls. Use the jog tread to step frame by frame through a clip or program to position to a specific frame. See also shuttle.

shuttle -- To move rapidly through a program, as with scan forward or scan reverse VCR controls. Use the shuttle slider control to scan rapidly through a clip or program to move to a general area in the material. See also jog.

preview -- To play a program on the Timeline and view the appearance of the final production, including transitions and effects. See also scrub.

real-time preview -- To play back a program in the Timeline at full rate, while showing edits such as transitions, effects, overlays, and titles. Allows viewing the effects of edits immediately, without the need to wait and render the program each time. Video editors simulate the frame rate and appearance of the final program as possible depending on the complexity of the program and the system performance.

scrub -- To play a program in the Timeline by dragging the edit line. You can also render-scrub to show the visual effects of transitions or other effects, but not at full playback speed. See also real-time preview.

render -- To generate a video production in its final form, including transitions, effects, and superimposed tracks. You can render portions of a Timeline in order to preview your edits at that point, or render the entire production before exporting it in its final form, to a disk file or out to tape.

render-scrub -- To preview a program in the Timeline and display the visual effects of transitions or other effects but not at full playback speed. Used to preview a portion of the Timeline before rendering it. See also scrub, real-time preview.

export -- To save your production to a file or to an external video device. You can export both individual clips and entire productions on the Timeline to a variety of disk and Web media file formats. See also import.

scratch disk -- A dedicated work area on hard disk. Used for temporary storage and for saving preview files.

preview file -- Temporary file to save the results of rendering a portion of the Timeline. With these files, editors can preview the results of your editing on the Timeline at full playback rate, including transitions and effects. See also scratch disk.

Video Editing - User Interface

Project window -- The main window, used to import and save clips used in the program you are editing and organize them into bins. You save each editing activity in a separate Project file, including the imported material and editing context.

Bin window -- A window used to import and organize folders of source clips.

Clip window -- A window used to view and trim individual clips. See also Monitor window, Source view.

Storyboard window -- A window used to organize a group of clips into a sequence. You can use this window to quickly lay out the scenes to include in your production into a rough cut and then move them into the Timeline for further editing. See also Timeline window.

Timeline window -- A window used to assemble, trim, arrange, and superimpose video, audio, and image clips into a program. See also Storyboard window.

Monitor window -- The used to preview and edit the Source view of individual video clips and the Program view of the material being assembled on the Timeline. See also Clip window.

Source view -- The Monitor window view that displays a source clip for viewing and editing on the Timeline. The source clip can be from a bin in the Project window, or from a track on the Timeline. See also Program view.

Program view -- The Monitor window view that displays the production being assembled on the Timeline. Depending on the current settings, this can be a simple preview of the cuts between adjacent clips, or a fully rendered preview with transitions and effects. See also Source view.

Movie Capture window -- The window used to preview and record from DV and analog video and audio devices. Also used for batch capture of a group of clips.

Title window -- A window used to lay out and design title text and graphics.

palette windows -- Small floating windows that provide convenient access to information, options, and commands used in video editing. Palettes can be adjusted, hidden, and docked as desired to accommodate your editing style.

Transitions palette -- A window that lists the available video transitions, grouped by type. Used to access transitions to be applied to the Timeline. You can also reorganize and customize the list.

Video Effects palette -- A window that lists the available video effects, grouped by type. Used to access effects to be applied to a video clip. You can also reorganize and customize the list.

Effect Controls palette -- A window that lists the current effects applied to an audio or video clip. Used to adjust the order of effects and change effect settings.

Audio Effects palette -- A window that lists the available audio effects, grouped by type. Used to access effects to be applied to an audio clip. You can also reorganize and customize the list.

Audio Mixer window -- A window used to dynamically monitor and control the volume level and pan/balance of multiple audio tracks on the Timeline to combine them into a final program.

Navigator palette -- A window that displays a miniature view of the current Timeline work area within the overall program. Used to scroll and zoom the program in the Timeline view.

Commands palette -- A window that contains a list of preset commands. You can customize the palette to define buttons and function keys for fast access to often-used commands.

Info palette -- A window that displays information about a selected clip or transition.

History palette -- A window that displays a list of your recent actions during the current working session. Used to undo recent operations and return to a previous state of the project.

Video Editing - Import and Capture

import -- To bring media elements into your current working space. Video editors can import video and audio clips, still images, and animated sequences in a variety of formats. You can import both individual clips and folders of clips, and add them to bins in an open Project. See also capture, export.

capture -- To digitize, or import and convert, video and/or audio into digital format on your computer from external devices, such as a camcorder or VCR. You typically use a special video capture card to input analog video into your computer, and then convert and save it into digital files on your disk. With DV camcorders, you transfer digital data directly into your computer over a FireWire / 1394 interface. See also import.

batch capture -- The automated process of capturing an entire group of clips (such as from a DV camcorder) as defined by a batch list.

batch list -- A list of clips with the timecode values for each In and Out point (also called a timecode log) to be used in a batch capture process. See also batch capture, log, timecode.

log -- A list of clips in a longer sequence, identified by starting and ending timecodes. Use the batch log to build a list of clips to be batch captured from a tape.

Video Editing - Clips and Tracks

single-track editing -- A style of editing in which the Timeline is condensed to a single row per track. See also A/B editing.

A/B editing -- A style of video editing in which you edit together clips in pairs - A and B - typically with a transition from one to the next. This style is useful for assembling a program with simple drag-and-drop convenience. See also single-track editing.

duration -- A length of time. For a clip, the length of time that it will play, determined by its overall length. Or if the clip has been trimmed, the difference in time between its In point and Out point. See also timecode.

crop -- To make an image physically smaller by trimming away one or more edges. This reduces the dimensions of the image, and reduces the size of the computer file.

trim -- To cut out a segment of a clip by removing frames from the beginning and/or end. To adjust the In or Out points of a clip to identify the portion to be used in the final production.

marker -- A placeholder used to mark a specific timecode in a sequence. Use to keep track of changes, events, or synchronization points in a longer sequence. You can use the In and Out point markers to mark a clip to be captured from a source tape, to mark part of a clip to be trimmed, or to mark a portion of the Timeline to be played. See also In Point, Out Point.

In point -- A placeholder used to mark a specific timecode as the starting point of a segment in a longer sequence. You can use In and Out points to mark a clip to be captured from a source tape, to mark part of a clip to be trimmed, or to mark a portion of the Timeline to be played. See also marker, Out point.

Out point -- A placeholder used to mark a specific timecode as the end point of a segment in a longer sequence. You can use In and Out points to mark a clip to be captured from a source tape, to mark part of a clip to be trimmed, or to mark a portion of the Timeline to be played. See also marker, In point.

split edit -- To adjust the video and audio portions of a clip separately so that they start or end at different times. Used for audio cross-fading so that the audio can lead in or fade out independently from the cut in the video. See also L-cut and J-cut.

J-cut -- A split edit in which the In point of a clip is adjusted to overlap the preceding clip so that the audio portion of the later clip starts playing before its video as a lead-in to the visual cut. Also called an audio lead. See also L-cut.

L-cut -- A split edit in which the audio Out point of a clip is extended beyond the video Out point, so that the audio cuts after the video and continues playing over the beginning of the next clip. See also J-cut.

four-point edit -- A method of setting In and Out points to precisely control where and how frames are inserted into a Timeline. In a four-point edit, you set all four In and Out markers, and the editor displays a warning dialog if the durations do not match. See also three-point edit.

three-point edit -- A method of setting In and Out points to precisely control where and how frames are inserted into a Timeline. In a three-point edit, you set any three such markers, and the software determines the fourth to match the specified duration. See also four-point edit.

ripple edit -- A method of editing in the Timeline so that when new material is inserted, or existing material is deleted, other material is adjusted to fit. In a ripple edit, the change ripples through the rest of the material, as the existing clips slide apart to make room for the new material, or slide together to fill a gap. See also rolling edit, slide edit, slip edit.

rolling edit -- A method of editing in the Timeline by adjusting and trimming two adjacent clips. When you roll the cut point between the adjacent clips, the durations of the two clips are adjusted to keep the overall program duration unchanged. The Out point of the first clip is changed in tandem with the In point of the second clip so that, as one increases in duration, the other decreases to match it. See also ripple edit, slide edit, slip edit.

slide edit -- A method of editing in the Timeline by moving a clip and trimming neighboring clips to adjust to the change. When you slide a clip earlier or later in the program, the neighboring clips are trimmed accordingly by changing their In and Out points so that the duration of the overall program remains unchanged. See also ripple edit, rolling edit, slip edit.

slip edit -- A method of editing in the Timeline by changing the trim points in a clip. When you slip the trim points earlier or later in a clip, the In and Out points are adjusted correspondingly so that the duration of the clip is unchanged. A slip edit also does not affect the rest of the program on the Timeline. See also ripple edit, rolling edit, slip edit.

Video Editing - Titles

title -- Onscreen text (and associated graphics) that can be used to add information to your production. Used as a title screen at the beginning of your production, for subtitles superimposed under the video, and for rolling credits at the end.

subtitle -- A text overlay on video materials, typically used to display the audio dialog in various languages, or to transcribe hard-to-understand speech.

caption -- Title text that labels a scene or identifies a location or person onscreen.

credit -- Title text that identifies the people who contributed to a production. Usually scrolled at the end of a show.

crawl -- To scroll a line of title text sideways, left or right across the screen. See also roll.

roll -- To scroll lines of title text vertically up or down the screen. See also crawl.

kerning -- The spacing between adjacent characters in a text string, as in a title.

Video Editing - Transitions

transition -- A visual effect to segue from the end of one clip or scene and the start of the next. The most basic transition is a cut, in which the last frame of one clip is immediately followed by the first frame of the next clip. More interesting transition effects include fades, dissolves, and wipes between adjacent clips.

cut -- To switch instantly from one clip to another. A video cut appears suddenly onscreen without any other kind of transition effect. The cut is the most basic kind of transition for changing scenes and dropping titles onto the screen. See also fade, transition.

fade -- A gradual transition from one clip to another. With video, the clip changes from transparent to fully opaque (or vice versa) to fade in or out. With audio, the gain changes between silence and full volume.

dissolve -- A video transition in which one video clip fades into the next. See also fade, transition.

wipe -- A video transition in which the new video physically moves into the frame while displacing the old video.

Video Editing - Effects

effect -- The result of processing audio and video clips to enhance, improve, or distort them. See also filter.

animate -- To move and manipulate an object over time, such as a title, a superimposed logo, or a transition between frames.

keyframe -- A point along a timeline or path that defines where and how the settings for an effect will change. One or more settings can then be interpolated from keyframe to keyframe to create the appearance of a smoothly change over a series of frames or along a motion path. See also interpolate.

scale -- To reduce or enlarge an image or video sequence by squeezing or stretching the entire image to a smaller or larger image resolution.

filter -- A transformation applied to a video or audio clip to enhance it or create a visual or auditory effect. See also effect.

gamma -- A display setting related to the brightness of the middle tones of an image. You can adjust the gamma of an image to lighten or darken the midtones (the middle-gray levels), without significantly changing the dark and light areas (the shadows and highlights).

gradient -- Gradual change from one color (or intensity level) to another. Gradient colors can also become opaque or transparent, varying in translucency from one side to the other.

interpolate -- To automatically create graduated steps between two or more keyframes to create smooth transitions for video, audio, and motion effects.

antialias -- To smooth out a jagged or stair-step appearance or motion between adjacent points so that it appears continuous.

motion blur -- The effect of tracking a speeding object and thus blurring the background because of the motion.

Video Editing - Compositing

composite - superimpose -- To layer multiple tracks onto the Timeline. To composite portions of multiple clips into the final production by overlaying clips with transparent regions to allow the underlying tracks to show through. See also key.

superimpose track -- In video editing, the Video 2 track and above, which can include titles, logos, and other material to be overlaid on the bottom Video 1 track.

opaque -- Regions of a superimposed image that are solid (not transparent), and therefore cover over the underlying image. See also transparent.

transparent -- Regions of a superimposed image that are invisible, and therefore show through to the underlying image, as used for logo overlays and blue-screen effects. May be defined using a key color or alpha mask. Technically, overlays also can be translucent, and blend portions of the two images. See also opaque.

key -- To specify a region of an image or video clip to be used as a mask for transparency. Used to make part of the scene transparent or semitransparent, and then composite it with other superimposed images or video tracks. The region can be specified using features such as color (a color key) or intensity, or with a separate alpha mask or image matte. See also blue screen, matte.

mask - An image which defines areas in a frame to be used as a transparency key or matte. Each pixel in the mask image indicates the degree of transparency to be used for the corresponding pixel position in each frame. See key, matte.

matte -- An image mask used to define the transparent areas of each frame to be used in superimposing multiple clips. See also key.

alpha channel -- Extra information stored with an image to define transparent areas used for keying and superimpositions. Also called an alpha mask. Sometimes present in files prepared using a tool such as Adobe Photoshop or Illustrator. See also key.

blue screen -- A specially colored backdrop (typically blue or green) that can be matched with a color key and made transparent so that it can be replaced with another video layer. For example, you can cut out a subject from the blue screen background and composite it into another scene. See also matte, key.

garbage matte -- A mask used in a keying operation to remove a region of a frame that contains unwanted objects.

watermark -- A small, semitransparent graphic that identifies a scene or speaker. Many TV broadcasts use a watermark to let you know what channel you're watching.

Audio Editing and Effects

rip -- To extract data from a removable disc. Typically, to copy songs from a prerecorded CD-Audio disc to hard disc in order to organize a collection, and play and burn personalized playlists.

playlist -- Typically, a list of songs to be played in a specified order. Used to organize collections to download to a portable audio player or burn to a CD.

sweeten -- To use audio effects to enhance and manipulate the audio sound.

audio waveform -- A graphical representation of an audio clip, helping to visualize the sound in the clip by showing the signal levels. Editors can show a waveform in audio tracks in the Timeline and in a separate Clip window when you open an audio clip.

gang -- To adjust multiple tracks at the same time, as in the Audio Mixer window.

VU meter -- An audio mixer's display of audio levels for each track.

gain -- Overall audio output volume. Increase gain to amplify a clip, or decrease gain to attenuate a clip, making it quieter.

amplify -- Increase the audio volume.

attenuate -- To reduce audio strength or volume.

dynamic range -- The difference between the softest and loudest sounds. Decrease to compress the range and reduce noise, or expand to emphasize volume differences.

balance -- To distribute two channels of a stereo clip between the left and right channels. See also pan.

pan -- To move the apparent location of a mono audio track to position it between the left and right stereo channels. With stereo clips, you adjust the balance between the two channels. See also balance.

cross-fade -- See fade.

delay -- An audio effect that provides an echo of a sound after a specified time period.

equalize -- To adjust the tonal quality of an audio clip. As with graphic equalizers found in home or auto audio equipment, an equalize effect can to boost or cut the original signal at different frequency bands.

reverb -- An audio effect that simulates the ambience of a room of a specific size and with different sound-absorbent properties.

bandpass effects -- Audio effects designed to remove specific frequencies from an audio clip (manifested as hisses, whines, and hums).