

PARK ROAD

POST PRODUCTION

Glossary of film terms

10-bit – the number of levels available in a digital video signal. 10-bit offers 1023 levels, four times the accuracy of 8-bit, and vastly superior for telecine transfers and chroma-keying.

16x9 – a wide screen television format in which the aspect ratio of the screen is 16 units wide by 9 high as opposed to the 4x3 of normal TV.

2K – generic term for data with a resolution of (about) 2000 pixels which is deemed to be good enough for many 35mm applications.

4:2:2 – the sampling ratio used in the D1 (CCIR601) digital component video signal. For every 4 samples of luminance there are two samples each of R-Y (Red minus luminance) and B-Y (Blue minus luminance). Thus it has full black and white resolution, but only half the colour information. The best digital standard in the early 1990's.

4:4:4 – a sampling ratio that has equal amounts of the luminance and both chrominance channels. The new digital component video standard that has full colour information as well as full black and white information. 4:4:4 provides better colour resolution than even before, improves telecine transfers and chroma-keying.

8-bit – the number of levels available in a typical digital video signal. 8-bit offers 255 levels.

8:8:8 – the sampling ratio of a da Vinci digital colour enhancement system, well above current recording standards, in order to produce film like images even after extreme manipulations. The da Vinci Digital Unified Colour Corrector da Vinci is the only manufacturer working in the 8:8:8 domain.

A&B Roll – an edited master of original film material assembled into two separate rolls, one for the odd numbered shots and one for the even numbered shots, so that dissolves, wipes and supers can be overlapped and printed together. A&B rolls are also used to hide splices on a print.

Aaton Code – a form of time code recorded optically along the edge of the film, during its exposure in camera. After development, the code can be read by an optical sensor. Typically used to synch sound during the telecine transfer.

Aberration – distortion, usually optical, especially of lenses.

Academy Format – a film aspect ratio of 4:3, which is 1.33:1. It is of particular importance because this is also the aspect ratio of standard television systems.

Active Video – the portion of a video signal which is visible on a screen, and not blanked. Vertically the active picture area is 487 lines for NTSC and 576 lines for PAL. Also known as Active Picture Area.

ADR – automatic dialogue replacement.

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Aliasing – undesirable effects caused by image detail exceeding the sampling frequencies used. For example temporal aliasing – the spokes of a wagon wheel apparently rotating backwards. Raster Scan aliasing – the twinkling effect on fine horizontal lines, or the jagged edges produced by curved or oblique lines.

Analogue Video – video system of continuous variable electrical waves, whose size and shape contain essential picture information. Technically inferior to digital. Picture noise is introduced when tape copies are made. This 'generation loss' can lead to unacceptable quality.

Anamorphic – a system with different magnification in the horizontal and vertical planes, allowing the recording of wide screen formats. Examples are cinemascope in film, and Pal Plus in video.

Animation – the process of creating moving images from a series of still frames.

Answer Print – the second print (combining picture and sound, if a sound picture) in release form, offered by the laboratory to the producer for acceptance.

Anti-aliasing – filtering methods used to remove or minimize aliasing effects. See aliasing.

Aperture Correction – the process of enhancing apparent resolution, especially in video cameras, telecines and noise reducers. The technique exaggerates edges. Also known as Contour Correction.

Aspect Ratio – the relationship of the picture width to its height. Current television is 4x3 (or 1.33:1), which is the original academy standard for film. Proposals are for future television to be 16x9 (1.77:1). Film formats include 1.33:1, 1.66:1, 1.85:1 and 2.4:1.

Auto Scene Detector – a device that detects scene changes based on image content and contrast and then automatically generates an even list. Included as standard in all da Vinci systems.

Betacam – Sony analogue component videotape format. A broadcast quality, ½ inch tape, cassette based system. Now rare, replaced by Betacam SP and Digital Beta.

Betacam SP – Sony analogue component videotape format. A broadcast quality, ½ inch tape, cassette based system.

BITC (Burned in Time Code) – time code numbers that are superimposed on the picture, and may be viewed on any monitor or TV.

Black Crushing – loss of low light (shadow) detail caused by adjusting luminance information below the Black Level.

Blanking – the part of the video signal that contains no picture information. A signal applied to prevent unwanted signals from being visible. Such signals would be synchronizing pulses, burst VITC etc.

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Bleach Bypass/Reduction – during colour film processing when bleaching is not carried to completion, it is called reducing or bypass. Some of the silver image remains and less of the colour dye is coupled creating a distinctive contrast faded look.

Bleeding – a term that refers to crisp edges that are not, usually as a result of some overload. Examples include fuzzy titles in film opticals as a result of over exposure, and chroma bleed on videotape recordings caused by the saturation being too high in the source material.

Blow Up – optical enlargement of an image.

Blow Up Printing – optical printing resulting in a picture image size other than that of the original film (ie Super 16 to 35mm).

Byte – 8 bits. The combination of 8 bits into 1 byte allows each byte to represent 256 possible values.

Cell Side (Celluloid Side) – the base surface of a strip of film.

Chrominance – the colour part of a video signal. The property of light which produces a sensation of colour in the human eye, apart from any variation of luminance which may be present. Also known as chroma.

Cinch Works – short scratches on the surface of a motion picture film, running parallel to its length; these are caused by improper winding of the roll, permitting one coil of film to slide against another.

Cinemascope – trade name of a system of anamorphic widescreen presentation. In everyday usage it has come to mean any form of widescreen format. True cinemascope uses an anamorphic lens to compress the image horizontally 2:1 to achieve an aspect ratio of 2.39:1.

Clipping – electronic limits imposed to prevent signals exceeding maximum levels for white, black and chrominance. Hard clips simply remove all data at a define level. Soft clips attempt to retain some data by compressing the signal.

Colour Balance – the removal of colour casts from an image. Also the removal of colour casts from a camera or monitor.

Colour Bars – this is a test pattern used to check whether a video system is calibrated correctly. A video system is calibrated correctly if the colours are the correct brightness, hue and saturation. This can be checked with a vectorscope, or by looking at the RGB levels.

Colour Cast – an overall bias of a single colour to an image, camera or monitor. May or may not be intentional. Examples include sepia toning, uncorrected tungsten lights on daylight film and tobacco filters.

Colour Grader/Timer – the person who grades or matches the colour and levels of film either for print in the laboratory or in Telecine for videotape.

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Colour Grading – the process of colour correction or enhancement. Usually takes place either in the laboratory prior to making the final print, or in the telecine suite as part of the film to tape process. It is now possible to colour grade in the tape-to-tape domain too. The term usually implies a preview and adjust stage, followed by a real time replay with the new grades.

Colourist – a person who advises on and manipulates colour and colour visual style. The user of a da Vinci (or similar) colour enhancement system.

Com Opt (Combined Optical) – a film print with an optical sound track as well as the picture.

Component Video – a video signal where different elements (either luminance and colour difference, or Red, Green and Blue) are kept as separate signals. Full bandwidth is retained which is vital to post production applications like chroma-keying, digital video effects, digital graphics (Flame, Flash, Harry, Harriet) and computer graphics.

Composite Print – a motion picture print with both picture and sound on the same strip of film.

Composite Video – a video signal where the different elements (luminance and chrominance), have been encoded to form one combined signal. This combination creates NTSC, PAL or SECAM video, often with artifacts in fine detail. Composite provides unacceptable quality for chroma-keying work, but is good for transmission/distribution, as only one cable is needed.

Compositing – layering multiple pictures on top of each other. A cutout or matte holds back the background and allows the foreground to appear to be in the original picture.

Contact Print – print made by exposing the receiving material in contact with the original. Images are the same size as the original images, but have a reversed left-to-right orientation.

Contrast – a term referring to how far the whitest whites are from the blackest blacks. “Contrast” is the general term for the property called “gamma” (γ). If the peak white is far away from the peak black, the image is said to have high contrast. With high contrast, the image is very stark and very “contrasty”, like a black-and-white tile floor. If the two are very close to each other, the image is said to have poor, or low, contrast and looks gray.

Countdown – a leader inserted prior to a program, providing a visual and audible indication of the time left before the first frame of the program. Film leaders may be in feet or seconds. Video leaders are generally in the form of a clock.

CRT (Cathode Ray Tube) – the technical name for a picture tube or the scanning tube in a flying spot telecine.

Custom Curves – the Custom Curves option provides the means to redefine the 888 gamma controls. In this way it is possible to extend or restrict the range of these controls, or to limit the luminance values which are to be affected. It is also possible to create exciting

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effects by applying different gamma enhancements at different luminance values. Custom Curves can therefore be used to define black stretch, soft white clip, solarization and posterized effects.

Dailies (Rushes) – picture and sound work prints of a day's shooting; usually ungraded/untimed one-light print made at LAD. Produced so that the action can be checked and the best takes selected; usually shown before the next day's shooting begins.

Da Vinci – famous manufacturer of advanced tools for creative post production, in particular image colour enhancement, storage and restoration. Best known for their 8:8:8, 2K, HD2, QF2 and RS2 products.

Digital Betacam – Sony cassette component digital videotape format. 10 bit, compressed 4:2:2 recording to CCIR 601 standard.

Digital Film – a generic term for film stored as digital data. In this form the film can be manipulated, edited, and enhanced before being returned back to film or recorded as video.

Digital Tracklaying – tracklaying using digital workstations.

Digital Video – minimizes generation loss as information is recorded as a series of numbers. For optimum results, pictures should originate in the digital domain and remain digital throughout post production. More precise and faster sampling improves accuracy.

Digitizing – the act of taking analogue video and converting it to digital form. In 8 bit digital video there are 256 possible steps between maximum white and minimum black.

Dissolve – an optical transition where one scene fades out over another scene fading in, achieved either by contact or optical printing.

DLT (Digital Linear Tape) – an older data tape format that is economic and uses cartridges.

Dolby – brand name for a noise reduction system for film sound and audio – not to be confused with Dolby Stereo which is a system used in film to carry 4 tracks of audio (left, center, right, surround) as 2 tracks.

DOP – Director of Photography/Cinematographer.

Dubbing – the combination of several sound components into a single recording.

DUI (Da Vinci User Interface) – the name given to SGI controlled Renaissance 8:8:8 systems to distinguish them from the earlier text based, or "Classic Interface" systems.

Dupe (Duplicate) – a copy (of a piece of film).

Dupe Negative – A duplicate negative, created from an original negative using intermediate stocks for making release prints, optical effects and titles.

Edge Damage – physical damage of the edge of a film or the perforation.

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Edge Numbers – sequential numbers printed along the edge of a strip of film by the manufacturer to designate identification and frame position.

Edit – to arrange the various shots, scenes and sequences or the elements of the sound track, in the order desired to create the finished film.

Editing – the process of selecting the shots and sequences that will be included in the final film, their length, and the order in which they will appear.

Edit on Avid – offline editing system using digitized footage.

Edit Sync – the relation between the picture and sound records during editing when they are in alignment and not offset as for projection.

EDL (edit decision list) – list of edits prepared during offline editing.

Emulsion – the part of a film which is light sensitive.

Fade – exposure of motion picture film either in the camera or during subsequent operations so that, for a fade-in, starting with no exposure and extending for a predetermined number of frames, each successive frame receives a systematically greater exposure than the frame preceding it, until full normal exposure for the scene has been attained. From this frame on, successive frames receive identical exposure for the remainder of the take.

Field – one half of a complete video picture (frame), containing all the odd or even scanning lines of the picture. In animation, the size of a shot is expressed in fields.

Fine Cut – last editing of a work print before conforming is done or before sound work prints are mixed (also referred to as the Lock Off).

Flare – a streak of light across a frame or frames, caused by reflections or stray light in the optical system of a camera or telecine.

Flicker – the result of a rapid and rhythmic exposure change across a few frames, usually caused by uneven camera speed, or HMI lights that are not locked to the camera shutter. The alternation of light and dark periods which can be visually appreciated.

Fog – darkening or discolouring of a negative or print, or lightening or discolouring of a reversal material. Causes include accidental exposure to light or Xrays, overdevelopment, using outdated film and storing film in a hot, humid place.

Foley – creating sound effects in post production.

Format – The size of a motion picture stock. The standard and tape type of a recording, the dimensions of an image.

FPS – frames per second.

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Frame – the individual picture image in a sequence of motion picture film. One complete video image, made up of 2 fields. There are 30 frames in one second of NTSC video, and 25 in PAL.

Framing – Composing image elements, by adjusting their size and position in a view finder or on a television monitor.

Freeze – an effect in which a single frame image is repeated so as to appear stationary.

FX – Effects.

Gamma – the adjustment of mid tones (telecine). The ratio of light input to electrical output (video). The measure of contrast of a photographic process (film).

Gate – the aperture assembly at which the film is exposed in a camera, telecine, printer or projector.

Gauge – refers to the format of the film stock, ie Super 16, 16mm or 35mm.

Generations – the number of times an image has been duplicated.

Gigabyte – one billion bytes (1,000,000,000).

Grade/Timing (Colour) – the selection of the appropriate printing lights for the printing process.

Hue – the property of light that discriminates one colour from another.

Interlace – a process in which the picture is split into two fields by sending all the odd numbered lines to field one and all the even numbered lines to field two. One video frame is made up of two interlace fields. This was necessary in the early days of TV when there was not enough bandwidth to send a complete frame fast enough to create a non-flickering image.

Intermediate – negative film used for making duplicates, negatives or interpositives from which other duplicates or prints are made. Does not include camera films.

Internegative – colour negative made from an interpositive, from which the release prints are made. The internegative is composited and colour graded (colour timed), and of low contrast making it a good choice for telecine processes.

Interpositive – a colour master positive on a negative based intermediate film stock (the process between master negative and dupe negative).

Keycode – a barcode on the edge of motion picture film which allows the film edge numbers to be electronically read and inserted into an edit list. Very useful for generating a negative cut list from a video off-line EDL.

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Kilovectors – extremely powerful digital secondary correction process available in all da Vinci's from Renaissance onwards. Kilovectors allow secondary colour corrections to be qualified by hue width (from 3-360 degrees) and center (+/- 0.3 degrees). Once defined hue, saturation, luminance and contrast can be modified.

Kinescope – a film recording of a video image displayed on a specially designed television monitor. Also called "Kine".

Layback – transferring the finished audio track back to the master videotape.

Leader – any film or strip of material used for threading a motion picture machine. Leader may consist of short lengths of blank film attached for the ends of a print or negative to protect the film from damage during the threading on a projector or printing machine.

Letterbox – black bands at the top and bottom of a TV screen to change the aspect ratio of the picture area. Widescreen images can then be viewed full width on a conventional 4x3 TV.

Liquid Gate – a system by which film is temporarily coated with a layer of liquid at the moment of transfer to reduce the effect of surface faults such as scratches. Originally a laboratory printing process, it is now also available on telecines. Also known as "Wet Gate".

LTC (Linear Time Code) – time code recorded on a linear analogue track on a video tape. It is audible and can be read at high speeds, but not when the tape is still.

Luminance – the black and white, or brightness, part of a component video signal.

Mark – a mark represents the point where a programmed event begins. There is only one Mark associated with an event and that event continues until the next Mark. Events must have a start Mark, but do not need a defined end. A single DUI session can store 9999 events.

Master Negative – the final negative film from which subsequent prints are made.

Matte – a black and white high contrast image that suppresses or cuts a hole in the background picture to reveal the foreground picture.

Megabyte – one million bytes (1,000,000).

Mix – to combine the various sound tracks, dialogue, music, sound effects, atmosphere – into a single track.

Mute – images with no sound.

Neg Cut – an edit applied to the original camera negative to produce either the source for a film master or a roll of selected takes usually in the edit order.

Negative Film – film stock when processed as a negative records the reverse to the positive scene photographed.

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Negative Matcher – person who cuts the negative to match the supplied print cutting copy or offline EDL.

Neg Process for Telecine Transfer – the processing of camera negative in preparation for telecine transfer.

NG (No Good) – a take that does not meet the required standard either technically or artistically.

Offline EDL – floppy disk produced from Offline edit (eg Avid, Lightworks) with cuts required for Online edit or neg matching.

Optical Effects – trick shots prepared by the use of an optical printer in the laboratory, especially fades and dissolves.

Optical Sound – a photographic sound track, not magnetic, printed down the edge of the film, either as a variable area or variable density track.

Opticals – general term for effects on film from fades, freeze frames, dissolves, superimpositions, split screens, wipes, double exposures, title sequences, squeezing blow-ups and stretching.

PAL (Phase Alternating Line) – the television and video standard in use in most of Europe. Consists of 625 horizontal lines at a field rate of 50 fields per second. (Two fields equals one complete Frame). Only 576 of these lines are used for picture. The rest are used for sync or extra information such as VITC and Closed Captioning.

PAL Plus – a wide screen (16x9) television standard that is broadcast in Europe. It is compatible with existing PAL (4x3) TV sets, which show the picture in a letterboxed form. PAL Plus recordings are in an anamorphic video format.

Perforations – precise regularly spaced holes punched throughout the length of a motion picture film to advance and position it in cameras, processing machines, and projectors. Telecines use perfs to establish frame boundaries.

Pin Registered – a system for stabilizing film which utilizes precise registration pins which are inserted through the perforations of the film. For perfect registration the film must be pin registered in camera, and then on the telecine or Oxberry printer. Telecine pin registration is also known as “Steadigating”. The perforations themselves must be manufactured to precise toleration, often called “neg perfs”.

Pixel (Picture Element or Picture Cell) – the basic unit from which a video or computer picture is made. Essentially a dot with a given colour and brightness value. D1 images are 720 pixels wide, by 486 high. NTSC images are 640 by 480 pixels.

Post Sync – the recording of the sound track effects and dialogue after the picture has been completed.

Power Window – an option for all digital da Vinci colour enhancement systems that generates soft edged areas of an image which can then be colour enhanced with

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independent primary and/or secondary corrections. This allows graduated filter and lighting effects for example.

Primary Correction – in colourist terminology “primary” corrections are those that affect the overall colour balance of an image. The da Vinci 888 provides 64 Bit four channel (YRGB) Primary processing. Others refer to telecine corrections as “primary” and external corrections, such as those from a da Vinci as “secondary”.

Printing – exposure of negative image onto print stock to give a projectable image. Also includes duping on to intermediates.

Processing – procedure during which exposed film is developed, fixed, and washed to produce either a negative or a positive image.

Push (processing) – overdeveloping film to increase the films effective speed, or ASA (also referred to as force processing).

Pull (processing) – underdeveloping film to decrease the films effective speed, ASA.

Reduction Printing – making a copy of smaller size than the original by optical printing.

Registration – the accurate positioning of film or images.

Release Print – in a motion picture processing laboratory, any of numerous duplicate prints of a subject made for general theatre distribution.

Resolution – the amount of detail in an image. Higher resolution equals more detail. Also used to describe the size of an image, usually in pixels or lines.

Reversal – a type of film stock which, after processing, produces a positive image. Once popular for news gathering, it is now often used because of the distinctive high contrast look which it creates.

RGB (Red, Green, Blue) – the primary colours of light and additive colour systems such as colour television. Computers and some analogue component devices use separate red, green and blue colour channels to keep the full bandwidth and therefore the highest quality picture.

Rostrum – a motion picture camera used for animation or title work, includes frame and footage counters and has the ability to expose a single frame at a time.

Rushes (dailies) - picture and sound work prints of a day's shooting; usually untimed one-light print made without regard to colour balance. Produced so that the action can be checked and the best takes selected; usually shown before the next day's shooting begins.

Safe Action Area – the area of a viewing monitor deemed to be visible on all domestic television sets and therefore safe for capturing movement. Defined by SMPTE standards as 10% smaller than the video transfer of such material.

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Safe Title Area – the area of a viewing monitor deemed to be readable on all domestic television sets and therefore safe for text. Defined by SMPTE standards as 20% smaller than the maximum image size.

Saturation – a measure of the dilution of a pure colour with white light. The amount of colour in a picture.

Scanning – the process of breaking down an image into a series of elements representing light values and transmitting these elements in time sequence. The process of telecine transfer, or film digitising.

Scene – a single element of a film or program, with unique location action and camera. A scene can comprise of many events.

Scratches – non-photographic blemishes on the film emulsion or base.

SCSI (Small Computer Systems Interface) – a general-purpose parallel interface used to connect computers or peripherals.

Secondary Correction – in colour processing terminology “secondary” corrections are those that only affect a specific colour within an image. Digital da Vinci systems provide both a conventional 6 vector secondary system and the unique user definable Kilovector secondary system. All colour enhancements downstream of the telecine are sometimes referred to as Secondary Correction.

Serial Digital Video – Composite (D2) or Component (D1) digital video passed down a single coaxial cable. The current standard calls for a 270 Mbit per second sampling rate and provides for 10-bit video, although 8 bits are commonly used.

Session – A file created by a da Vinci user, for a specific job. It stores a Desktop, Configuration and up to 9999 events with their VSRs. A single booking as a post production facility.

SGI – Silicon Graphics Interface.

Skip Frame – an optical printing effect eliminating selected frames of the original scene to speed up the action.

Soft – low contrast, unsharp, out of focus.

Sound Negative – the negative record of photographic sound recording and mix.

Sound Rushes – transfer of field recording to editing medium (16mm, 35mm or video).

Special Effect – a term broadly applied to any of numerous results obtained in the laboratory by combination and manipulation of one or more camera records to produce an imaginatively creative scene different from what was in front of the main camera. The making of special effects may involve techniques such as double printing, fades, mattes, vignetting, etc.

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Splice – any type of cement or mechanical fastening by which two separate lengths of film are united end-to-end so they function as a single piece of film when passing through a camera, film processing machine, or projector.

Sprocket – a toothed driving wheel used to move film through various machines by engaging with the perforation holes. These perforations in film are also known therefore as sprocket holes.

Step Printer – a printer in which each frame of the negative and raw stock is stationary at the time of exposure.

Sync – synchronisation. The maintenance of one operation in step with another, the vertical and horizontal pulses that coordinate the TV scanning system.

Telecine – the system or machine for transferring film to videotape (often referred to as telecine chain).

Thin – applied to a negative, having low density, usually as a result of underexposure. The image from a thin negative will be very dark, with little or no shadow detail. Stretching the contrast will enhance film grain.

Timecode – A time reference in hours, minutes, seconds and frames, recorded on tape to identify each frame. Comes in three flavours, EBU, SMPTE, and SMPTE drop-frame. It may be recorded as LTC, VITC or BITC.

Timecode Sound – an audio representation of timecode.

Timing/Grade (Colour) – the selection of the appropriate printing lights for the printing process.

Titles (Credits) – titles of acknowledgement for the production.

TLC (Time and Logic Controller) – the world's most comprehensive telecine edit system. Originally a stand-alone device TLC is integrated into DUI and TLC-2K is integrated into the 2K.

Tracklay – process of laying sound including dialogue, atmospheres, effects, foley, to build your sound track. From here, all elements are mixed.

QUICKTIME (Video Home System) – a consumer video cassette format.

VITC (Vertical Interval Time Code) – Visual time code stored in the vertical blanking interval above the active picture area. Has the advantage of being readable by a VTR in still or jog. Multiple lines of VITC can be added to the signal allowing the encoding of more information than can be stored in normal LTC.

Wet Gate – a device used on a film printer to immerse the negative and print stock in fluid to reduce or hide scratches on the subsequent print.

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Widescreen – general term for form of film presentation in which the picture shown has an aspect ratio greater than 1.33:1.

Wipe – optical transition effect in which one image is replaced by another at a boundary edge moving in a selected pattern across the frame.

Work Print – positive film copy of dailies or rushes. A rough print of a motion picture film used for editing and study of action and continuity.

Zoom – the effect of a camera lens changing focal length and so making the image larger or smaller.