



**Marcus Graichen [mog]**

Multimedia producer,  
university lecturer,  
corporate training and  
consultancy specializing in  
3D, Video and Web  
technologies.

[mog@mogmachine.com](mailto:mog@mogmachine.com)

## Glossary of Terms

# Flash Video



**artifact**

Distortion to a picture or a sound signal. With digital video, artifacts can result from overloading the input device with too much signal, or from excessive or improper compression.

**AVI**

Abbreviation for Audio-Video Interleaved; the algorithm created by Microsoft for synchronizing and compressing analog audio and video signals. AVI is also the file format used by Video for Windows

**bandwidth**

(1) The frequency range of a video signal in MHz. (2) The amount of information that can be carried by a signal path. Similar to the amount of water that can be carried by a pipe of a specific diameter.

**batch capture**

The automated process of capturing clips in a list. A list of clips to be batch captured.

**bitmap**

A graphic image comprised of individual pixels, each of which has a value that define its relative brightness and color.

**broadcast quality**

A quality standard for composite video signals set by the NTSC and conforming to FCC rules. If you plan to record video signal or videotape for broadcast, it is important to note that devices providing NTSC signals do not necessarily meet FCC broadcast standards.

**camcorder**

A combination camera and recording device that records continuous pictures and generates a signal for display or recording.

**capture card**

Sometimes called a capture or video board, the logic card installed into a computer and used to digitize video. Or, for video that is already digitized, the device that simply transfers the file to the hard disk. Using a hardware or software codec, the capture card also compresses video in and decompresses video out for display on a television monitor.

**chroma key**

A video effect wherein a particular area of color is removed from one video signal and replaced with a different signal. This effect is often used during newscasts when a weather map is inserted behind a meteorologist during a newscast.

**clip**

A digitized or captured portion of video

**codec**

Contraction of compression/decompression algorithm; used to encode and decode, or compress and decompress data, such as sound and video files. Common codecs include those that convert analog video signals to compressed digital video files (e.g., MPEG), or that convert analog sound signals into digital sound files (e.g., RealAudio).

**compositing**

The combining of two or more images into a single frame or display.

**compression**

The translation of audio or video data into a format that requires less storage space than the original data.

**data rate**

The amount of data moved over a period of time, such as 10MB per second. Often used to describe a hard drive's ability to retrieve and deliver information.

**deinterlace**

To remove artifacts that result from the nature of two-fields-per-frame (interlaced) video.

**digital**

Information in the form of binary data. Computers are digital machines that use a binary system. That is, at their most basic level, computers can distinguish between just two values, 0 and 1 (i.e, off and on). There is no simple way to represent all the values in between, such as 0.25. All data that a computer processes must be digital, encoded as a series of zeros and ones. Digital representations are approximations of analog events. They are useful because they are relatively easy to store and manipulate electronically.

**digitize**

To convert analog video, audio, or both to digital form.

**Digital video (DV)**

A video signal made of binary digits. To store and manipulate analog video on a computer workstation, it must be converted to digital video.

**DV**

Abbreviation for digital video. DV can also denote the type of compression used by DV systems or a format that incorporates DV compression. The DV designation is also used to for a special type of tape cartridge used in DV camcorders and DV tape decks.

**dub**

To record or mix pre-recorded audio or video from one or more sources to a another source to create a single recording.

**DVD**

Abbreviation for digital versatile disc. DVDs look like CDs, but have a much larger storage capacity - more than enough for a feature-length film compressed with MPEG-2. DVDs require special hardware for playback.

**DVD-ROM**

A digital storage medium based on DVD that may eventually replace CD-ROM.

**DVD-Video**

An MPEG-based digital storage medium used for pre-recorded movies. DVD-Video may eventually replace VHS.

**FireWire**

The Apple Computer trade name for IEEE 1394.

**fps**

Abbreviation for frames per second; the standard for measuring the rate of video playback speed. A rate of 30 fps is considered real-time speed and a rate of 24 fps is considered animation speed. At 12-15 fps, the human eye can detect individual frames causing video to appear jerky.

**frame**

A single still image in a sequence of images that, when displayed in rapid succession, creates the illusion of motion. The more frames per second (fps), the smoother the motion appears.

**frame rate**

The number of frames per second displayed during playback

**generation loss**

The incremental reduction in image or sound quality or both due to repeated copying of analog video or audio information and noise introduced during transmission. Generation loss does not occur when copying digital video unless it is repeatedly compressed and decompressed

**i.LINK**

The Sony trade name for IEEE 1394.

**IEEE**

Abbreviation for the Institute of Electrical and Electronic Engineers; the organization that sets many of the electronic-industry standards.

**IEEE 1394**

The interface standard that enables direct transfer of DV between devices, such as a DV camcorder and a computer. IEEE 1394 also describes the cables and connectors utilizing this standard.

**keyframing**

The process of creating an animated clip wherein by selecting a beginning image and an ending image the software automatically generates the frames in between.

**letterbox**

The aspect ratio of motion pictures is wider than those of standard televisions. To preserve the original aspect ratio of a motion picture, a motion picture includes black bars at the top and bottom of the screen when played on television.

**lossy**

A compression scheme or other process, such as duplication, that causes degradation of signal fidelity. Lossy algorithms compress digital data by eliminating the data least sensitive to the human eye, and offer the highest compression rates available.

**lossless**

A compression scheme or other process, such as duplication, that does not affect signal fidelity, such as the transfer of DV via an IEEE 1394 connection.

**MPEG**

Motion Pictures Expert Group of the International Organization for Standardization (ISO) that has defined multiple standards for compressing audio and video sequences. MPEG is also referred to as both a type of compression and a video format.

**MPEG-1**

The international compression standard for the conversion of analog motion video to digital motion video that includes both video and audio data. MPEG meets the needs CD-ROM and video-on-demand applications. Actual compression over uncompressed digital video is about 100:1. MPEG-1 was initially designed to deliver near-broadcast quality video through a standard speed CD-ROM. Playback of MPEG-1 video requires either a software decoder coupled with a high-end computer or a hardware decoder.

**MPEG-2**

MPEG-2 is an extension of the MPEG-1 compression standard designed to meet the requirements of television broadcast studios. MPEG-2 is the broadcast quality video found on DVDs and requires a hardware decoder (e.g., a DVD-ROM player) for playback.

**multimedia**

The combining of different computer-based media - usually audio, text, graphics, and animation - into a single presentation. Multimedia presentations are typically played back directly from the computer.

**non-linear editing**

Random-access editing of video and audio on a computer, enabling edits to be processed and reprocessed at any point in the timeline, at any time. Traditional videotape editors are linear because they require editing video sequentially, from beginning to end.

**NTSC**

(1) Abbreviation for the National Television Standards Committee that standardized the NTSC color broadcasting system currently used in the United States. (2) The video format standard defined by the NTSC, also called composite because it combines all the video information, including color, into a single signal. See NTSC composite.

**off-line editing**

A preliminary edit generally performed on an inexpensive editing system using video tape copies of the original master tapes. Off-line editing enables editors to make decisions and obtain approvals before making more expensive on-line edits.

**on-line editing**

The final linear editing of the original master tapes to produce the finished piece. An on-line edit suite generally includes all the necessary high-end devices (e.g., a switcher, TBC, character generator, etc.).

**overscan**

(1) The portion of a television picture that extends beyond the normal screen size. (2) The method for scanning a video image beyond the normal viewing area of a screen. Contrast with underscan.

**PAL**

Phase-alternating line television standard used in most European and South American countries. PAL uses an interlaced display with 50 fields per second, 25 frames per second.

**pixel**

Contraction for picture element; the smallest computer display element represented as a point with a specified color and intensity level. Graphics programs generally create images with square pixels. NTSC and PAL video pixels, however, are generally rectangular, which means graphics displayed on a TV screen will be distorted (e.g., a circle will display as an ellipse) unless the pixel aspect ratio of the graphics is adjusted to suit the video.

**post-production**

The stage of a film or video project during which footage is edited and assembled and effects, graphics, titles, and sound are added.

**pre-production**

The planning phase of a film or video project, usually completed prior to production.

**printing to tape**

Outputting a digital video file for recording onto a videotape.

## **Print to Video**

A feature of Adobe Premiere that enables you to play a clip or the Timeline centered on a monitor. If the clip or Timeline is smaller than the full screen, it will play alone or on a black background. Print to Video is useful for previewing the program in the Timeline, for viewing source clips or individual files, or for video playback because it allows you to play a quarter screen video at full screen size. Some capture cards do not support Print to Video.

## **production**

The phase of a film or video project that involves shooting or recording raw footage.

## **QuickTime**

Apple Computer's multi-platform, industry-standard, multimedia software architecture. QuickTime is used by software developers, hardware manufacturers, and content creators to author and publish synchronized graphics, sound, video, text, music, virtual reality, and 3-D media. QuickTime 4 includes support for Real Time Streaming Protocol (RTSP).

## **raw footage**

Original, unedited film or video footage that has not been modified.

## **RealMedia**

Architecture designed specifically for the Web, featuring multimedia streaming and low data-rate compression options. RealMedia works with or without a RealMedia server.

## **real-time**

In computing, an operating mode under which data is received, processed, and the results returned quickly enough to seem instantaneous. In video, real-time also refers to effects and transitions that happen without interrupting rendering.

## **resolution**

(1) The amount of information in each frame of video, normally represented by the number of horizontal pixels times the number of vertical pixels (e.g., 640 x 480). (2) The measure of the extent to which detail is distinguishable on a TV screen. (Generally referred to as "horizontal resolution" for video images.) Resolution is determined by the limit to which the lines of a test pattern are distinguished by the naked eye. The broader frequency band of a video signal allows for higher resolution.

## **RGB**

Abbreviation for red, green, blue; the three primary colors of the additive color system, such as that used to display color on a computer monitor or television screen.

## **S-VHS**

Short for Super VHS, a much improved version of VHS (compatible with VHS).

## **S-video**

Short for Super-video, a technology used for transmitting video signals over a cable by dividing the video information into two separate signals: one for luminance and one for chrominance. (S-Video is synonymous with Y/C video). S-video is a consumer form of component video used primarily with Hi8 and S-VHS equipment.

## **safe title area**

The area that comprises the 80 percent of the TV screen measured from the center of the screen outward in all directions. The safe title area is the area within which title credits - no matter how poorly adjusted a monitor or receiver may be - are legible.

**still frame**

A single frame of video repeated so it appears to have no motion.

**streaming**

The process of sending video over the Web or other networks to allow playback on the desktop as the video is received, rather than requiring the entire file to be downloaded prior to playback.

**striping**

Preparing a tape for editing by recording continuous control track, timecode, and a video signal (e.g., black). Also known as black stripe.

**switcher**

The device that serves as a central router and mixer of video source material in an on-line suite, and performs effects (e.g., fades and dissolves) as well as switching incoming channels. Also known as a video switcher

**temporal compression**

A compression method that reduces the data contained within a single video frame by identifying similar areas between individual frames and eliminating the redundancy.

**three-point editing**

In Adobe Premiere, the feature that enables editors to insert a clip into an existing program where only three of the four in and out points of the clip to be inserted, and the portion of the program where the clip is being inserted, are known.

**temporal compression**

A compression method that reduces the data contained within a single video frame by identifying similar areas between individual frames and eliminating the redundancy.

**three-point editing**

In Adobe Premiere, the feature that enables editors to insert a clip into an existing program where only three of the four in and out points of the clip to be inserted, and the portion of the program where the clip is being inserted, are known.

**timecode**

Generally refers to the industry standard of SMPTE timecode, which is formatted as four numbers separated by colons (e.g., 21:52:31:20). The numbers represent hours, minutes, seconds, and frames, and are added to video to enable precise editing. Since color video runs at 29.97 fps instead of 30 fps, two kinds of timecode have evolved: drop-frame and non-drop-frame. Non-drop-frame timecode is formatted as four numbers separated by semicolons (e.g., 21;52;31;20).

**timeline**

The graphical representation of program length onto which video, audio, and graphic clips are arranged.

**title generator**

A black-and-white camera used for shooting titles that are electronically superimposed onto the video picture during shooting or editing. A more sophisticated device known as a character generator (CG) can generate titles directly.

**transition**

The change from one video clip to another.

## **uncompressed video**

Raw digitized video displayed or stored in its native size