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1080p

1080p is the shorthand identification for a set of high-definition television (HDTV) video modes that are characterized by 1080 horizontal lines of vertical resolution and progressive scan, meaning unlike the 1080i display standard, the image is not interlaced.

The term usually assumes a widescreen aspect ratio of 16:9, implying a resolution of 1920 pixels wide by 1080 high. This resolution is similar to that of 2K digital cinema technology. The frame rate can be either implied by the context or specified after the letter 'p', such as 1080p30, meaning 30 progressive frames per second.

1080p, sometimes referred to in marketing materials as Full HD, typically refers to the capability to accept 1080p signal and display it with native resolution of at least 1080 lines, as well as the capability to upscale lower-resolution material to 1080p.

HD ready 1080p logo program by DIGITALEUROPE requires that certified TV sets support 1080p24, 1080p50, and 1080p60 formats, and feature a native resolution of at least 1920×1080 pixels, among other requirements.

AUDIO CASSETTS

The Compact Cassette, often referred to as audio cassette, cassette tape, cassette, or simply tape, is a magnetic tape sound recording format. Although originally designed for dictation, improvements in fidelity led the Compact Cassette to supplant the Stereo 8 track cartridge and reel-to-reel tape recording in most non-professional applications. Its uses ranged from portable audio to home recording to data storage for early microcomputers. Between the early 1970s and ending in the late 1990s, the cassette was one of the two most common formats for prerecorded music, first alongside the LP and later the Compact Disc.

Compact Cassettes consist of two miniature spools, between which a magnetically coated plastic tape is passed and wound. These spools and their attendant parts are held inside a protective plastic shell. Two stereo pairs of tracks (four total) or two monaural audio tracks are available on the tape; one stereo pair or one monophonic track is played or recorded when the tape is moving in one direction and the second pair when moving in the other direction. This reversal is achieved either by manually flipping the cassette or by having the machine itself change the direction of tape movement ("auto-reverse").

AVC-INTRA

AVC-Intra is a type of video coding developed by Panasonic that is fully compliant with the H.264/MPEG-4 AVC standard and additionally follows the SMPTE RP 2027-2007 recommended practice specification. AVC-Intra is available in a number of Panasonic's high definition broadcast products, such as, for example, their P2 card equipped broadcast cameras. It is now also supported in various products made by other companies.

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Panasonic announced AVC-Intra codec support in April 2007. The use of AVC-Intra provides production quality HD video at bit rates more normally associated with ENG (Electronic news gathering) applications, permitting full resolution, 10 bit field capture of high quality HD imagery in one piece camera-recorders.

AVC-Intra is intended to serve needs of video professionals who have to store HD digital video on digital storage media for editing and archiving purposes. It defines 10-bit intra-frame only compression, which is easy for editing and preserves maximum video quality. The technology significantly outperforms the older HDV (MPEG2 based) and DVCPRO HD (DV based) formats, allowing the codec to maintain better quality in half the storage space.

BETA

Betamax (sometimes called Beta) is a home videocassette tape recording format developed by Sony, released on May 10, 1975. The cassettes contain 1/2-inch (12.7mm)-wide videotape in a design similar to the earlier, professional 3/4-inch (19.05mm) U-matic format. The format is generally considered obsolete, though it is still used in specialist applications by a small minority of people.

Like the rival videotape format VHS (introduced in October 1977 by JVC), Betamax had no guard band and used azimuth recording to reduce crosstalk. According to Sony's own history webpages, the name came from a double meaning: beta being the Japanese word used to describe the way signals were recorded onto the tape, and from the fact that when the tape ran through the transport, it looked like the Greek letter beta (β). The suffix -max came from "maximum", to suggest greatness.

Sanyo marketed a version as Betacord, but this was also referred to casually as "Beta". In addition to Sony and Sanyo, Beta-format video recorders were also sold by Toshiba, Pioneer, Murphy, Aiwa, and NEC; the Zenith Electronics Corporation and WEGA Corporations contracted with Sony to produce VCRs for their product lines. Department stores like Sears (in the U.S. and Canada) and Quelle (Germany) sold Beta-format VCRs under their house brands, as did the RadioShack chain of electronic stores. Betamax and VHS competed in a fierce format war, which saw VHS come out on top in most markets.

BETACAM

Betacam is a family of half-inch professional videotape products. It was developed by Sony in 1982. In colloquial use, "Betacam" singly is often used to refer to a Betacam camcorder, a Betacam tape, a Betacam video recorder or the format itself.

All Betacam variants from (plain) Betacam to Betacam SP and Digital Betacam (and additionally, HDCam & HDCamSR), use the same shape cassettes, meaning vaults and other storage facilities do not have to be changed when upgrading to a new format. The cassettes come in two sizes: **S** and **L**. Betacam cameras can only load **S** tapes, while VTRs can play both **S** and **L** tapes. The cassette shell and case for each Betacam cassette is colored differently depending on the format, allowing for easy visual identification. There is also a mechanical key that allows a video tape recorder to tell which format has been inserted.

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The format supplanted the three-quarter inch U-Matic format, which Sony had introduced in 1971. In addition to improvements in video quality, the Betacam configuration of an integrated camera/recorder led to its rapid adoption by electronic news gathering organizations.

DigiBeta the common name for Digital Betacam went on to become the single most successful professional broadcast tape format in history.

Even though Betacam remains popular in the field and for archiving, new digital products such as the Multi Access Video Disk Recorder are leading to a phasing out of Betacam products in a studio environment.

BETA SP

Beta SP stands for *Beta Superior Performance*, referring to the videotape format *Betacam* that originated in the early 1980s and reached a zenith with the SP iteration in 1986. Beta SP utilizes metal-formulated tape as opposed to Betacam's oxide tape composition, and has an increased horizontal resolution of 340 lines. The larger cassette size of Beta SP enabled 90 minutes of recording time with this variety, and became the industry standard for high-end production houses and most TV stations until the late 1990s. Despite the age of the format, Beta SP remains a common standard for video post-production even today.

BLU-RAY

Blu-ray Disc (official abbreviation BD) is an optical disc storage medium designed to supersede the DVD format. The standard physical medium is a 12 cm plastic optical disc, the same size as DVDs and CDs. Blu-Ray Discs contain 25 GB per layer, with dual layer discs (50 GB) the norm for feature-length video discs and additional layers possible later.

The first Blu-ray Disc prototypes were unveiled in October 2000, and the first prototype player was released in April 2003 in Japan. After that, it continued to be developed until its official release in June 2006.

The name Blu-ray Disc refers to the blue laser used to read the disc, which allows information to be stored at a greater density than is possible with the lasers used for DVDs.

Blu-ray Disc was developed by the Blu-ray Disc Association, a group representing makers of consumer electronics, computer hardware, and motion pictures. As of June 2009, more than 1,500 Blu-ray Disc titles were available in Australia and the United Kingdom, with 2,500 in the United States and Canada. In Japan, as of July 2010, more than 3,300 titles were released.

During the high definition optical disc format war, Blu-ray Disc competed with the HD DVD format. Toshiba, the main company that supported HD DVD, conceded in February 2008, releasing their own Blu-ray Disc player in late 2009.

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DIGITAL8

Digital8 (or D8) is a consumer digital videotape format developed by Sony, and introduced in 1999.

The Digital8 format is a combination of the older Hi8 tape transport with the DV codec. Digital8 equipment uses the same videocassettes as analog Hi8 equipment, but differs in that the audio/video signal is encoded digitally (using the industry-standard DV codec.) Since Digital8 uses the DV codec, it has identical audio and video specifications.

To facilitate digital recording on existing Hi8 videocassettes the video head drum spins 2.5x faster. For both NTSC and PAL Digital8 equipment, a standard-length 120-minute NTSC/90-minute PAL Hi8 cassette will store 60 minutes of Digital8 video (Standard Play) or 90 minutes (Long Play). LP is model specific, such as the TRV-30, TRV-40, and others. Digital8 recordings can be made on standard-grade Video8 cassettes, but this practice is discouraged in the Sony user manuals. Hi8 metal-particle cassettes are the recommended type for Digital8 recording, and most tapes currently sold are marked for both Hi8 and Digital8 usage.

DIGITAL BETACAM

Digital Betacam (commonly referred to as Digibeta, d-beta, dbc or simply Digi) was launched in 1993. It supersedes both Betacam and Betacam SP, while costing significantly less than the D1 format. S tapes are available with up to 40 minutes running time, and L tapes with up to 124 minutes.

The Digital Betacam format records a lossless 2 to 1 DCT-compressed component video signal at 10-bit YUV 4:2:2 sampling in NTSC (720×486) or PAL (720×576) resolutions at a bitrate of 90 Mbit/s plus four channels of uncompressed 48 kHz / 20 bit PCM-encoded audio. A fifth analog audio track is available for cueing, and a linear timecode track is also used on the tape. It is a popular digital video cassette format for broadcast use.

Another key element which aided adoption was Sony's implementation of the SDI coaxial digital connection on Digital Betacam decks. Facilities could begin using digital signals on their existing coaxial wiring without having to commit to an expensive re-installation.

DIVX

DivX is a brand name of products created by DivX, Inc. (formerly DivXNetworks, Inc.), including the DivX Codec which has become popular due to its ability to compress lengthy video segments into small sizes while maintaining relatively high visual quality.

There are two DivX codecs; the regular MPEG-4 Part 2 DivX codec and the H.264/MPEG-4 AVC DivX Plus HD codec. It is one of several codecs commonly associated with "ripping", whereby audio and video multimedia is transferred to a hard disk and transcoded.

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DVCAM

In 1996 Sony responded with its own professional version of DV called DVCAM.

Like DVCPRO, DVCAM uses locked audio, which prevents audio synchronization drift that may happen on DV if several generations of copies are made.

When recorded to tape, *DVCAM* uses 15 µm track pitch, which is 50% wider compared to baseline. Accordingly, tape is transported 50% faster, which reduces recording time by one third compared to DV. Because of the wider track and track pitch, DVCAM has the ability to do a frame accurate insert tape edit, while DV may vary by a few frames on each edit compared to the preview.

It is possible to record Mini-DV footage on DVCAM tapes.

DVCPRO

DVCPRO, also known as *DVCPRO25*, is a variation of DV developed by Panasonic and introduced in 1995 for use in electronic news gathering (ENG).

Unlike baseline DV, DVCPRO uses *locked audio* and 4:1:1 chroma subsampling for both 50 Hz and 60 Hz variants to reduce generation loss. Audio is available only in the 16-bit/48 kHz variant.

When recorded to tape, DVCPRO uses wider track pitch – 18 µm vs. 10 µm of baseline DV, which reduces the chances of dropout errors when video is recorded to tape. Two extra longitudinal tracks provide audio cue and for time code control. Tape is transported 80% faster compared to baseline DV, resulting in shorter recording time. Long Play mode is not available.

DVD

DVD is an optical disc storage media format, invented and developed by Philips, Sony, Toshiba, and Time Warner in 1995. DVD discs offer higher storage capacity than compact discs while having the same dimensions.

Pre-recorded DVD discs are mass-produced using molding machines that physically stamp data onto the DVD. Such discs are known as DVD-ROM, because data can only be read and not written nor erased. Blank recordable DVD discs (DVD-R and DVD+R) can be recorded once using a DVD recorder and then function as a DVD-ROM. Rewritable DVD discs (DVD-RW, DVD+RW, and DVD-RAM) can be recorded and erased multiple times.

DVD discs are used in DVD-Video consumer digital video format and in DVD-Audio consumer digital audio format, as well as for authoring AVCHD discs. DVD discs containing other types of information may be referred to as DVD data discs.

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FLASH VIDEO (FLV)

Flash Video is a container file format used to deliver video over the Internet using Adobe Flash Player versions 6–10. Flash Video content may also be embedded within SWF files. There are two different video file formats known as Flash Video: FLV and F4V. The audio and video data within FLV files are encoded in the same way as they are within SWF files. The latter F4V file format is based on the ISO base media file format and is supported starting with Flash Player 9 update 3. Both formats are supported in Adobe Flash Player and currently developed by Adobe Systems. FLV was originally developed by Macromedia.

The format has quickly established itself as the format of choice for embedded video on the web. Notable users of the Flash Video format include YouTube, Hulu, Google Video, Yahoo! Video, metacafe, Reuters.com, and many other news providers.

The standards documentation for BBC Online states that the BBC now preferentially accepts Flash videos for submission, to the disadvantage of other formats previously in use on its sites such as RealVideo or WMV.

Flash Video FLV files usually contain material encoded with codecs following the Sorenson Spark or VP6 video compression formats. The most recent public releases of Flash Player (collaboration between Adobe Systems and MainConcept) also support H.264 video and HE-AAC audio. All of these codecs are currently restricted by patents.

Flash Video is viewable on most operating systems, via the Adobe Flash Player and web browser plugin or one of several third-party programs.

H.264 / MPEG-4 AVC (MP4)

H.264/MPEG-4 Part 10 or AVC (Advanced Video Coding) is a standard for video compression, and is currently one of the most commonly used formats for the recording, compression, and distribution of high definition video. The final drafting work on the first version of the standard was completed in May 2003.

H.264/MPEG-4 AVC is a block-oriented motion-compensation-based codec standard developed by the ITU-T Video Coding Experts Group (VCEG) together with the ISO/IEC Moving Picture Experts Group (MPEG). It was the product of a partnership effort known as the Joint Video Team (JVT). The ITU-T H.264 standard and the ISO/IEC MPEG-4 AVC standard (formally, ISO/IEC 14496-10 – MPEG-4 Part 10, Advanced Video Coding) are jointly maintained so that they have identical technical content.

H.264 is perhaps best known as being one of the codec standards for Blu-ray Discs; all Blu-ray players must be able to decode H.264. It is also widely used by streaming internet sources, such as videos from Vimeo, YouTube and the iTunes Store, web software such as the Adobe Flash

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Player and Microsoft Silverlight, broadcast services for DVB and SBTVD, direct-broadcast satellite television services, cable television services, and real-time videoconferencing.

HDCAM

HDCAM, introduced in 1997, is an HD version of Digital Betacam, using an 8-bit DCT compressed 3:1:1 recording, in 1080i-compatible downsampled resolution of 1440×1080, and adding 24p and 23.976 PsF modes to later models. The HDCAM codec uses rectangular pixels and as such the recorded 1440×1080 content is upsampled to 1920×1080 on playback. The recorded video bitrate is 144 Mbit/s. Audio is also similar, with 4 channels of AES3 20-bit/48 kHz digital audio.

Like Betacam, HDCAM tapes are produced in small and large cassette sizes; the small cassette uses the same form factor as the original Betamax.

The main competitor to HDCAM is DVCPRO HD format offered by Panasonic. It uses a similar compression scheme and bitrates ranging from 40 Mbit/s to 100 Mbit/s depending on frame rate.

HDCAM SR

HDCAM SR was introduced in 2003 and standardised in SMPTE 409M-2005. It uses a higher particle density tape and is capable of recording in 10 bits 4:2:2 or 4:4:4 RGB with a video bitrate of 440 Mbit/s, and a total data rate of approx. 600 Mbit/s.[2] The increased bitrate (over HDCAM) allows HDCAM SR to capture much more of the full bandwidth of the HDSI signal (1920×1080). Some HDCAM SR VTRs can also use a 2x mode with an even higher video bitrate of 880 Mbit/s, allowing for a single 4:4:4 stream at a lower compression or two 4:2:2 video streams simultaneously. HDCAM SR uses MPEG-4 Part 2 Simple Studio Profile[1] for compression, and expands the number of audio channels up to 12 at 48 kHz/24-bit.

There are 12 channels of audio recorded uncompressed at 24bit 48 kHz sampling. Each channel is capable of recording AES3 non-audio data.

HDCAM SR is used commonly for HDTV television production. As of 2007, many prime-time network television shows use HDCAM SR as a master recording medium.

Some HDCAM VTRs play back older Betacam variants, for example, the Sony SRW-5500 HDCAM SR recorder, plays back and records HDCAM and HDCAM SR tapes and with optional hardware also plays and upconverts Digital Betacam tapes to HD format. Tape lengths are the same as for Digital Betacam, up to 40 minutes for S and 124 minutes for L tapes. In 24p mode the runtime increases to 50 and 155 minutes, respectively.

HDCAM tapes are black with an orange lid, and HDCAM SR tapes black with a cyan lid.

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440 Mbit/s mode is known as SQ, and 880 Mbit/s mode is known as HQ, and this mode has recently become available in studio models (eg. SRW-5800) as well as portable models previously available. In 2008 the SRW-5800 will give the "HQ" 4:4:4 option.

Sony has also announced a higher compression mode called "SR Lite". As with the 440 and 880 mode, SR Lite utilizes the MPEG-4 Part 2 Simple Studio Profile but decreases the bitrate down to 220 Mbit/s for 60i and 183 Mbit/s for 50i. SR Lite is locked at 4:2:2 color sampling but still maintains at 10 bit pixel depth. It also allows for 50 and 60p at the cost of a doubled data rate (440 Mbit/s for 60p).

HDV

HDV is a format for recording of high-definition video on DV cassette tape. The format was originally developed by JVC and supported by Sony, Canon and Sharp. The four companies formed the HDV consortium in September 2003.

Conceived as an affordable high definition format for digital camcorders, HDV quickly caught on with many amateur and professional videographers due to its low cost, portability, and image quality acceptable for many professional productions.

HDV and HDV logo are trademarks of JVC and Sony.

U-MATIC

U-matic is a videocassette format first shown by Sony in prototype in October 1969, and introduced to the market in September 1971. It was among the first video formats to contain the videotape inside a cassette, as opposed to the various open-reel formats of the time. Unlike most other cassette-based tape formats, the supply and take-up reels in the cassette worked in opposite directions during playback, fast-forward and rewind: one reel would run clockwise while the other would run counter-clockwise. A locking mechanism integral to each cassette secures the tape hubs during transportation to keep the tape wound tightly on the hubs. When the cassette is loaded into the videocassette recorder (VCR) or player, the mechanism releases the hubs, permitting the hubs to spin. A spring-loaded tape cover door protects the tape from damage; when the cassette is inserted into the VCR, the door is released and is opened, enabling the VCR mechanism to spool the tape around the spinning video drum. Accidental recording is prevented by the presence of a red plastic button fitted to a hole on the bottom surface of the tape; removal of the button disabled recording. As part of its development, in March 1970, Sony, Matsushita Electric Industrial Co. (Panasonic), Victor Co. of Japan (JVC), and five non-Japanese companies reached agreement on unified standards.

VHS

The Video Home System (better known by its abbreviation VHS) is a consumer-level video standard developed by Japanese company JVC and launched in 1976.

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A VHS holds a maximum of about 430 m (1,410 ft.) of tape at the lowest acceptable tape thickness, giving a maximum playing time of about 3.5 hours for NTSC and 5 hours for PAL at “standard” (SP) quality. Other speeds include LP and EP/SLP which double and triple the recording time, for NTSC regions. These speed reductions cause a slight reduction in video quality (from 250 lines to 230 analog lines horizontal); also, tapes recorded at the lower speed often exhibit poor playback performance on recorders other than the one they were produced on. Because of this, commercial prerecorded tapes were almost always recorded in SP mode, although budget labels such as Video Treasures, Starmaker, Burbank Video, and even Paramount, as well as other smaller companies commonly used the slower speed.

VHS tapes have approximately 3 MHz of video bandwidth and 400 kHz of chroma bandwidth, which is achieved at a relatively low tape speed by the use of helical scan recording of a frequency modulated luminance (black and white) signal, with a down-converted “color under” chroma (color) signal recorded directly at the baseband. Each helical track contains a single field (‘even’ or ‘odd’ field, equivalent to half a frame) encoded as an analog raster scan, similar to analog TV broadcasts. The horizontal resolution is 170 lines per scanline, and the vertical resolution (the number of scanlines) is the same as the respective analog TV standard (575 for PAL or 486 for NTSC). In modern-day digital terminology, VHS is roughly equivalent to 333×480 pixels luma and 40×480 chroma resolutions (333×480 pixels=159,840 pixels or 0.16MP (1/6 of a MegaPixel)).

JVC would counter 1985’s SuperBeta with VHS HQ, or High Quality. The frequency modulation of the VHS luminance signal is limited to 3 megahertz which makes higher resolutions impossible, but an HQ branded deck includes luminance noise reduction, chroma noise reduction, white clip extension, and improved sharpness circuitry. The effect was to increase the apparent horizontal resolution of a VHS recording from 240 to 250 analog (equivalent to 333 pixels from left-to-right, in digital terminology). The major VHS OEMs resisted HQ due to cost concerns, eventually resulting in JVC reducing the requirements for the HQ brand to white clip extension plus one other improvement.

In 1987 JVC introduced a new format called Super VHS which extended the bandwidth to over 5 megahertz, yielding 420 analog horizontal (560 pixels left-to-right).

VHS-C

VHS-C is the compact VHS format introduced in 1982 and used primarily for consumer-grade compact camcorders. The format is based on the same videotape as is used in VHS, and can be played back in a standard VHS VCR with an adapter. Though quite inexpensive, the format is largely obsolete even as a consumer standard and has been replaced in the marketplace by digital video formats, which have smaller form factors.

The magnetic tape on VHS-C cassettes is wound on one main spool and used a gear wheel which moves the tape forward. It can also be moved by hand. This development hampered the

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sales of the Betamax system somewhat, because the Betamax cassette geometry prevented a similar development.

VHS-C was one of the pioneering formats of the compact camcorder market, and was released to compete with Video8. VHS-C cassette was larger than Video8 cassette, but was compatible with VHS tape recorders. A higher quality version of VHS-C was released, based on S-VHS, known as S-VHS-C, that competed against Hi8, the higher quality version of Video8. The arrival on the market of inexpensive S-VHS-C camcorders led to the inclusion on many modern VCRs of a feature known as SQPB, or SuperVHS Quasi-PlayBack, but did not make a significant impact on the market as the arrival of MiniDV as a consumer standard made low-cost, digital, near-broadcast-quality video widely available to consumers, and rendered analog camcorders largely obsolete.

Compared with Video8, VHS-C had identical video quality but a shorter run time, 120 versus 40 minutes at SP speed, 240 versus 120 for longer-running modes. Although at one time JVC marketed a 45-minute and a 60-minute SP Mode tape with the Extra High Grade formulation (135 minutes, and 180 minutes in EP/SLP Mode). Hi8 and S-VHS-C both have laserdisc quality pictures, but media is far less readily available than the cameras themselves, and thus most S-VHS-C units support S-VHS ET, which allows recording of an S-VHS signal on high-grade VHS tape.

Although Video8 acquired a digital variant, Digital8, it is extremely unlikely that D-VHS will ever be adapted to a compact format, as the consumer camcorder industry has largely standardized on small-format MiniDV and the new hard drive based recorders. As of 2010, a few VHS-C and S-VHS-C camcorders are still available from JVC at extremely low prices (~US\$200), and the media remains widely-available at relatively low cost.

M4V

M4V is a file container format used by Apple's iTunes application. The M4V file format is a video file format developed by Apple and is very close to MP4 format. The differences are the optional Apple's DRM copyright protection, and the treatment of AC3 (Dolby Digital) audio which is not standardized for MP4 container.

Apple uses M4V files to encode TV episodes, movies, and music videos in the iTunes Store. The copyright of M4V files may be protected by using Apple's FairPlay DRM copyright protection. To play a protected M4V file, the computer needs to be authorized (using iTunes) with the account that was used to purchase the video. However, unprotected M4V files without AC3 audio may be recognized and played by other video players by changing the file extension from '.m4v' to '.mp4'.

Besides Apple iTunes and Apple QuickTime Player, M4V files can also be opened and played with the version of Windows Media Player included with Windows 7, Media Player Classic, RealNetworks RealPlayer, VideoLAN VLC media player and Nero Showtime (included with Nero Multimedia Suite). The format, with DRM removed, can also be played in the webOS Video

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Player for use on the Palm Pre, Palm Pixi smartphones. It is also playable by the Android operating system with its video player. It can also be played with the BS Player Pro.

M4V video with FairPlay attached to it is read in QuickTime as AVC0 Media.

MINIDV

MiniDV is one of three common digital formats used in sound and picture recording. Using digital technology, MiniDV captures video and audio on high-density cassette tapes. This format is very popular, as it delivers sound and video that is decidedly sharp and high quality.

The MiniDV format is one of the most commonly used formats for camcorders. Leading manufacturers like Sony, Panasonic, JVC, Sharp, Canon, and many others offer MiniDV camcorders. These camcorders deliver video that is much clearer than analog camcorders. They also offer stronger color reproduction. Furthermore, MiniDV camcorders are lightweight and compact, many featuring extras like MPEG and night recording.

MiniDV camcorders make shooting video and importing video content to a PC easy. Once on the PC, video content can be edited, converted for Internet use, or even burned to a DVD. Transferring video to a PC can be accomplished using an IEEE-1394 interface, commonly known as FireWire or i.Link. However, the cards are easy to purchase if a computer is lacking one.

There are many MiniDV camcorders from which to choose, from those designed for the budget-conscious to professional-quality models. Camcorders using this format are widely supported by video-editing software applications. Usually, MiniDV camcorders can be connected to a television or VCR for display or copying purposes.

MiniDV tapes are tiny, only a fraction of the size of other digital video (DV) cassettes. They are commonly used for both personal and semiprofessional-quality video. The tapes are available in recording lengths of 30, 60, and 80 minutes.

Among digitally recorded cassette tapes, MiniDV tapes are the most widely used. These tapes offer easy compatibility for playback on almost any type of DV-compatible device. In fact, MiniDVs can even be used for playback on devices intended for DVCAM and DVPRO tapes. This is because the tapes are identical to DVCAM and DVPRO tapes, with the exception of the recording format.

Despite the fact that MiniDV is highly compatible with a full range of devices, conversion to DVD or other formats may be desired at times. Conversion can be accomplished inexpensively using automated software, hardware, or manual procedures. MiniDVs can be converted fairly easily, even by those with little experience.

PAL

PAL, short for Phase Alternating Line, is an analog color television encoding system used in broadcast television systems in many countries. Other common analogue television systems are

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SECAM and NTSC. This page primarily discusses the colour encoding system. See the articles on broadcast television systems and analogue television for additional discussion of frame rates, image resolution and audio modulation. For discussion of the 625-line / 25 frame per second television standard, see 576i.

QUICKTIME (MOV)

QuickTime File Format (QTFF) is a computer file format used natively by the QuickTime application.

The format specifies a multimedia container file that contains one or more tracks, each of which stores a particular type of data: audio, video, effects, or text (e.g. for subtitles). Each track either contains a digitally-encoded media stream (using a specific format) or a data reference to the media stream located in another file. Tracks are maintained in a hierarchical data structure consisting of objects called atoms. An atom can be a parent to other atoms or it can contain media or edit data, but it cannot do both.

The ability to contain abstract data references for the media data, and the separation of the media data from the media offsets and the track edit lists means that QuickTime is particularly suited for editing, as it is capable of importing and editing in place (without data copying). Other later-developed media container formats such as Microsoft's Advanced Systems Format or the Matroska and Ogg containers lack this abstraction, and require all media data to be rewritten after editing.

WEB-M

WebM is an audio-video format designed to provide a royalty-free, high-quality open video compression format for use with HTML5 video. The project's development is sponsored by Google.

A WebM file consists of VP8 video and Vorbis audio streams, in a container based on a profile of Matroska. The project releases WebM related software under a BSD license and all users are granted a worldwide, non-exclusive, no-charge, royalty-free patent license. Despite this, concerns have surfaced over potential for infringement on existing patents and some in the industry have called upon Google to provide indemnification against patent suits.

XVID

Xvid (formerly "XviD") is a video codec library following the MPEG-4 standard, specifically MPEG-4 Part 2 Advanced Simple Profile (ASP). It uses ASP features such as b-frames, global and quarter pixel motion compensation, lumi masking, trellis quantization, and H.263, MPEG and custom quantization matrices.

Xvid is a primary competitor of the DivX Pro Codec. In contrast with the DivX codec, which is proprietary software developed by DivX, Inc., Xvid is free software distributed under the terms of the GNU General Public License. This also means that unlike the DivX codec, which is only

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available for a limited number of platforms, Xvid can be used on all platforms and operating systems for which the source code can be compiled.