

Video

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What is a video???

- Video is a sequence of moving images, typically accompanied by audio, that is recorded, stored, or transmitted in a digital format.
- It is a visual medium that captures and conveys motion. events, or stories.
- Videos are composed of a series of individual frames played in rapid succession, creating the illusion of continuous motion

History of Video Editing

Linear Editing (1950s-1970s)

- Early video editing involved physically cutting and splicing film or videotape in a linear sequence.
- Editing decisions were permanent, and any changes required physical re-editing of the original material.

Non-Linear Editing (1980s)

- The advent of computers brought about non-linear editing (NLE) systems, allowing editors to manipulate digital video files on a computer.
- Systems like the CMX 600 and Avid Media Composer revolutionized editing by enabling non-linear, tapeless editing workflows.

Digital Age (1990s)

- Analog formats were gradually replaced by digital formats, enhancing video quality and providing better editing capabilities.
- Desktop editing software like Adobe Premiere emerged, expanding the accessibility of non-linear editing.

High-Definition (HD) and Digital Cinema (2000s)

- The shift to high-definition video formats and digital cinema influenced editing techniques and increased the demand for advanced editing tools.
- Editing systems evolved to support higher resolutions and frame rates.

frame per second (fps)

fps

- It is a unit of measurement indicating the number of individual frames or images displayed in one second of video.
- In the context of video editing and playback, a higher frame rate generally results in smoother motion.
- Common frame rates include 24fps (common in cinema),
- 30fps (common in television and online content)

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- Higher rates like 60fps or 120fps (used for smooth motion in gaming or certain video applications)
- **Frame rate is a critical factor in determining the visual quality and perceived smoothness of motion in a video.**

Pixeles

- a pixel is the smallest visual unit in a digital image or frame of video.
- Video resolution is described by the number of pixels in each frame, such as 1920x1080 for Full HD.
- Editors manipulate individual pixels when adjusting image details, applying effects, or enhancing visual elements during the editing process.

Understanding pixel dimensions is crucial for maintaining video quality and ensuring compatibility with various display devices.

Resolution in Video Editing

Types of Video Resolution

Standard Definition (SD)

- Resolution: 720x480 pixels (NTSC) or 720x576 pixels (PAL).
- Commonly Used For: Older television broadcasts and DVDs.

High Definition (HD)

- Resolution: 1280x720 pixels (720p) or 1920x1080 pixels (1080p).
- Commonly Used For: Modern television broadcasts, online streaming, and HD video content.

Types of Video Resolution

2K

- Resolution: 2048x1080 pixels.
- Commonly Used For: Digital cinema and high-quality video production.

4K

- Resolution: 3840x2160 pixels (Ultra HD) or 4096x2160 pixels (DCI 4K).
- Commonly Used For: Ultra HD television, online streaming, and professional video production.

8K

- Resolution: 7680x4320 pixels.
- Commonly Used For: Emerging technology, high-end video production, and future-proofing content.

Aspect Ratio in Video Editing

Aspect Ratio in Video Editing

- is the proportional relationship between the width and height of a video frame.
- It is expressed as a ratio, typically written as two numbers separated by a colon.
- Understanding aspect ratios is crucial in video editing as it affects how the video appears on different screens.

Common Aspect Ratios in Video Editing

- 16:9 (Widescreen) : This is the standard widescreen aspect ratio used in most modern video content. Resolution
- Examples: 1920x1080 (Full HD), 3840x2160 (4K).
- 4:3 (Fullscreen) : The traditional television and computer monitor aspect ratio before the widescreen era. Resolution
- Examples: 640x480, 800x600

Common Aspect Ratios in Video Editing(cont.)

- 1:1 (Square) :Each side of the frame is of equal length, creating a square format.
- Commonly Used For: Social media platforms like Instagram.
- 9:16 (Vertical or Portrait): The reverse of the standard widescreen aspect ratio, commonly used for vertical videos.
- Commonly Used For: Mobile devices and social media stories.

Common Aspect Ratios in Video Editing(cont.)

- 21:9 (Ultra-Wide): An even wider format, often used in gaming monitors and some cinematic productions.
- Resolution Examples: 2560x1080, 3440x1440.