

MPEG is

Short for ***M**oving **P**icture **E**xperts **G**roup*, and pronounced *m-peg*, a working group of ISO. The term also refers to the family of digital video compression standards and file formats developed by the group. MPEG generally produces better-quality video than competing formats, such as Video for Windows, Indeo and QuickTime. MPEG files can be decoded by special hardware or by software.

MPEG achieves high compression rate by storing only the changes from one frame to another, instead of each entire frame. The video information is then encoded using a technique called *DCT*. MPEG uses a type of *lossy compression*, since some data is removed. But the diminishment of data is generally imperceptible to the human eye.

There are three major MPEG standards: MPEG-1, MPEG-2 and MPEG-4.

- The most common implementations of the **MPEG-1** standard provide a video resolution of 352-by-240 at 30 frames per second (fps). This produces video quality slightly below the quality of conventional VCR videos.
- **MPEG-2** offers resolutions of 720x480 and 1280x720 at 60 fps, with full CD-quality audio. This is sufficient for all the major TV standards, including NTSC, and even HDTV. MPEG-2 is used by DVD-ROMs. MPEG-2 can compress a 2 hour video into a few gigabytes. While decompressing an MPEG-2 data stream requires only modest computing power, encoding video in MPEG-2 format requires significantly more processing power.
- **MPEG-4** is a graphics and video compression algorithm standard that is based on MPEG-1 and MPEG-2 and Apple QuickTime technology. Wavelet-based MPEG-4 files are smaller than JPEG or QuickTime files, so they are designed to transmit video and images over a narrower bandwidth and can mix video with text, graphics and 2-D and 3-D animation layers. MPEG-4 was standardized in October 1998 in the ISO/IEC document 14496. MPEG4-Part 10 is also known as H.264.