Video codecs generally use one or both of the following schemes: spatial and temporal compression.

Spatial compression is probably familiar to you from the world of still images. JPEG, PNG and PICT files each use types of spatial compression. Spatial compression schemes search a single image frame for patterns and repetitions that can be described in a simpler fashion. Most also simplify images to ensure that they contain these patterns. Nevertheless, more complex images are harder to compress, and will generally result in larger files. Spatial compression does not take time into account—it simply compresses each frame according to its encoding algorithm.

Temporal compression is unique to the world of moving images, since it operates by creating a description of change between consecutive frames. In general, temporal compression does not fully describe every frame. Instead, a temporally compressed movie contains two types of frames: keyframes, which are fully described frames (usually spatially compressed, as well), and regular frames, which are described by their change from the previous keyframe.
For applications where a movie will be played from start to finish, temporal compression is quite useful. Codecs like Sorenson use temporal compression to create extremely small files that are ideal for web playback. However, temporal compression is not a good choice if you need to play your movie backwards, since the order of the keyframes is vital to properly describing the sequence of images. If we play a temporally compressed movie backwards, the change descriptions will be processed before the keyframe that describes the initial state of the frame! Additionally, the Sorenson codec is quite processor-intensive to decompress. Playback of a Sorenson-compressed movie will be slower than playback of a movie compressed using a "lighter" method.

For Jitter playback, we recommend using a video codec without temporal compression, such a Photo-JPEG or Motion-JPEG (Photo- and Motion-JPEG compression use the same compression method, but Motion-JPEG is optimized for special hardware support [see note above]). At high quality settings, JPEG compression offers a nice compromise between file size and image quality. It's also relatively simple to decode, so your processor can be put to better use than decompressing video. If image quality is of principle importance, the Animation codec looks better than Photo-JPEG, but creates much larger files.
Different versions of QuickTime support different audio and video codecs. For instance, QuickTime 5 doesn't support the MPEG-4 codec, although QuickTime 6 does. You should experiment with different codec settings to find the best match for your particular use of Jitter.

Movie Dimensions and Frame Rate
Compared to codec, movie dimensions and frame rate are more straightforward factors in Jitter performance. Simply put, a bigger image frame or a higher frame rate indicates that Jitter has more data to process each second.
A 640x480 movie produces 1,228,800 individual values *per frame* for Jitter to process (640 times 480 times 4 (separate values for alpha, red, green and blue channels). A 320x240 movie produces a mere 307,200 individual values per frame, one quarter the size of the larger movie. Where possible, we recommend using smaller movies if you intend to use Jitter for processing. On most machines, 320x240 movies will give fine performance.
If you are working with DV media, your movies are recorded at 29.97 frames per second (in NTSC) or 25 frames per second (in PAL). Even using a 320x240 movie, Jitter has to process 9,206,784 values per second in NTSC and 7,680,000 values per second in PAL. Thinning this data, by reducing the frame rate to 15 or 20 frames per second, will improve performance significantly if you are using Jitter for processing. On most machines, 15 fps is a good choice.
Our Favorite Setting
We've found that, for most movies, the following parameters yield consistently good results:
• 320x240 frame size
• 15 frames per second
• Video tracks: Photo-JPEG codec, using a medium to high spatial quality setting
• Audio tracks: no compression