

How are MIDI files different from MP3 files for the same song?

MIDI is a file that contains a representation of music, storing its notes to use on specific software and MP3 is the recording of the song.

What do we mean when we use the terms "sample rate" and "bit depth" in an audio context?

These terms are used to talk about the quality of the audio. Sample rate is the number of times per second to take a digital snapshot and Bith depth is the number of bits used for these snapshots.

When might you want to use a GIF instead of a JPEG?

When I would like to do animation like a video, containing a few images.

When might you want to use a JPEG instead of a GIF?

When I would like to do something only with an image, having a hit quality on it.

Consider the GIFs below.

French Flag



German Flag



Let's assume that these images are the same resolution -- 300 pixels by 200 pixels. Nevertheless, it turns out that the German GIF is smaller (i.e., fewer bytes) than the French GIF. Hypothesize why that might be.

Because of the image compression. German flag has three colors on horizontal, being the losslessly compression more easier than the French flag on vertical.

In the context of RGB color, what is ff00ff, most likely?

Most likely a Pink

Keep in mind that "1-bit color" connotes two colors, black and white.

If an image supports "8-bit color," (roughly) how many colors does it support?

256

If an image supports "24-bit color," (roughly) how many colors does it support?

16700000

Consider the video below.

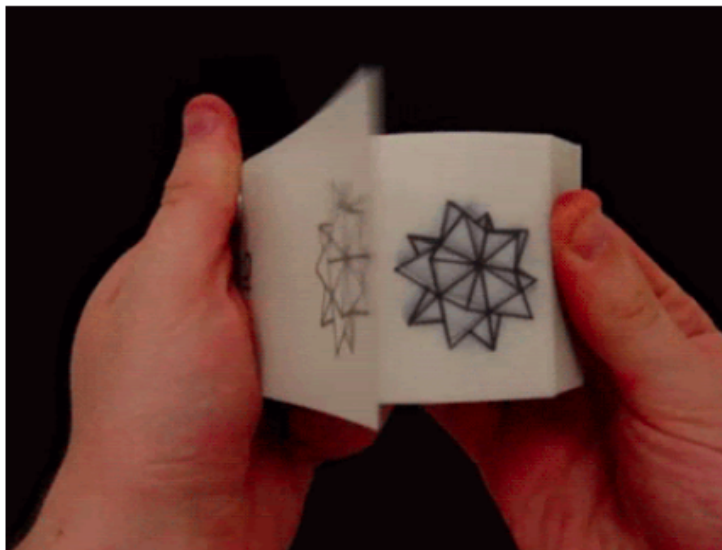


<http://youtube.com/watch?v=Wwnl0RS6J5A>

Why does making an image bigger not make it clearer?

Because the resolution is lower, being possible see the pixels.

Consider the childhood "flip book" below, each of whose pages has a slightly different drawing of a shape.



In what way is a childhood "flip book" like a digital video?

Videos are a just bunch of images in succession to create the illusion of a movement, as a flip book. Algorithms and mathematics help us going to one frame to another.