

SAMPLING AND ALIASING REFERENCES CH 4

Interesting illusion: the helicopter's blades are somehow in sync with the camera's shutter making it seem as though they are not moving. 0:47

<https://www.youtube.com/watch?v=qgvuQGY946g>

Helicopter blades and other fast spinning objects often produce strange effects on camera. Lauren explains why. 3:51

<https://www.youtube.com/watch?v=AYQAKwCxSc>

Audio Sampling Rate Demo 0:35

<https://www.youtube.com/watch?v=hRhVb6iRArg&feature=youtu.be>

Why car wheels rotate backwards in movies 4:25

<https://www.youtube.com/watch?v=SFbINinFsxk&feature=youtu.be>

Sampling and Aliasing – A Slide Show that is similar to our book presentation

BME 310 Biomedical Computing -J.Schesser

<https://web.njit.edu/~joelsd/Fundamentals/coursework/BME310computingcw6.pdf>

AUDIO: Bit Depth and Sample Rate 5:51

Jason Rodd (The Sonic Experience) There are two variables that determine the accuracy of a digital representation of an analog sound wave.. Bit Depth and Sample rate. In this video I explain how analog to digital conversion works. <https://www.youtube.com/watch?v=-0rIU...> Sound is naturally continuous analog information, so in order to store this wave of continuous information on a computer, it needs to be converted to numbers that represent this information. Each number represents a discrete point in the analog wave as it goes up and down for amplitude information, and left to right for timing information. Your computer has to play a game of connect the dots with these numbers to reconstruct the sound wave in a language it can understand. The extent to which digitized sound matches the original sound depends on the accuracy at which the computer, or interface, samples this analog information. It helps to have a basic understanding of how sound waves work in the physical world before you get into how the digital world represents them. So here's a link to my video on phase and the physics of sound if you haven't already seen it. <https://www.youtube.com/watch?v=GohIV...>
<https://www.youtube.com/watch?v=-0rIU9FHiU0>