

### Different Keyframe Interpolations:

Linear, Hold (Square Wave), Ease in & Ease out  
Necessary for accurate representation of behaviors

### Sampler Instruments:

Make one and experiment with settings  
Should something be one-shot or not?  
Sounds you want to have natural envelope have to be one shot  
Loops and sustained sounds are not one shot  
Whether you want things to be pitch changed  
Footsteps, breaths, do not need pitch change

### Redundancies in MPG 2:

Entropy redundancy, short codes for things that are more commonly repeated  
Temporal Redundancy...past and previous frames being referred to and coding the differences  
Spatial Redundancy...8x8 DCT blocks. Block of 11 bit coefficients that show you the spectral change relative to the DC offset (top left hand corner of the block, average energy) All the other points represent variations from that  
Go through packets and do all that shit  
Intraframe vs. Interframe  
Intraframe, within the same frame. "I-Frame"  
Macroblocks, groupings of DCT blocks, 4 of them is smallest one. You make them because temporal redundancy  
Allows it to find patterns among the pixels on a large scale to take advantage of repetition in the video.  
Delta refers to something based on change  
Video with legos in stop frame...do you rebuild everything, or just make small changes?  
You do what MPG does...save redundancies and encode changes

### Particle Systems:

Used for all the effects in everything  
Behaviors such as birth rate, life, scale over life, gravity, randomization  
Explosions, flames, fireworks, body parts, water spouts, etc  
Particle systems and keyframes can be used to prevent repetitive tasks  
Tools designed to make all this stuff easier  
Top five parameters for particle generators...just look at these a little bit  
Pick two behaviors to talk about...spin, audio based on amplitude, oscillate based on a waveform on rate, waveform, phase, target. Allows pendulum to be made