Motion Graphics Techniques - Lesson 9 Notes

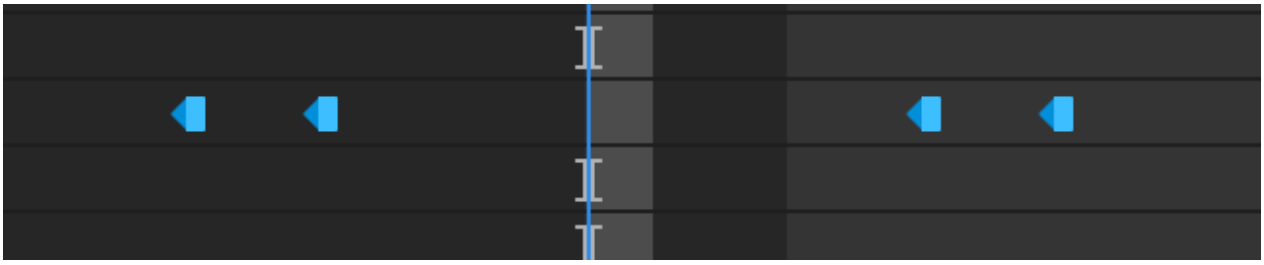
Full Body Character, Week 2: Tweening

Six Steps for Greater Tweening!

Good news! Your client has approved the key test you sent. Now it's time to finish the animation and polish all of the motion. Now it's time to Tween. Warning: the animation is going to look worse before it looks amazing.

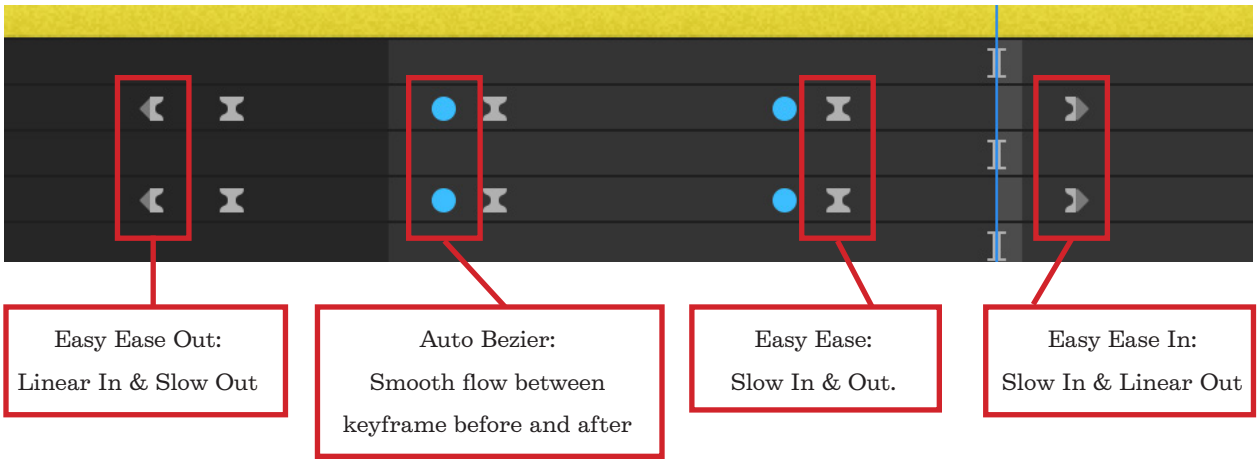
STEP 1: Edit & Reduce Keyframes

Last week I asked you to make lots of redundant keyframes, and now is a good time to take them out. For example, if you have ten rotation keyframes and seven of them are set to zero, you can edit out most of those redundant zero keyframes. Just make sure to keep the ones before and after a change in the animation.



STEP 2: Best Guess Interpolation

Convert all of the Hold keyframes to Linear. This is now the low point for the animation, and it will only get better from here. Figure out how you want the speed of the actions to flow from one pose to the next and then set the keyframes using "generic" interpolation, like Easy Ease Out and In, Easy Ease, and Auto-Bezier.



STEP 3: Speed Graph

Now it's time to work each cluster of keyframes in the Speed Graph. Pull those handles and really think about how you want the weight and balance of the character to feel. You might even move the keyframes around to add or subtract time to the movement.

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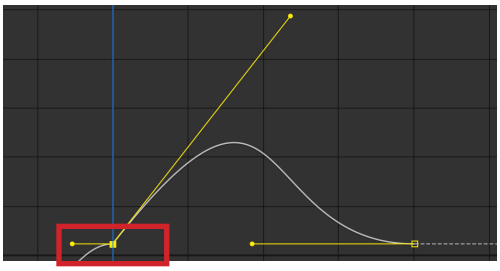
STEP 4: Fix Small Errors

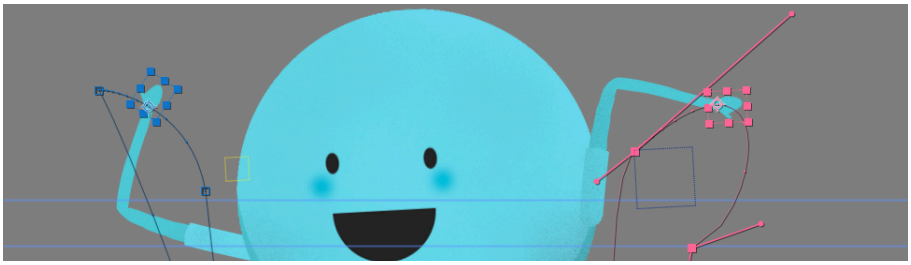
ERROR #1: Adjusting all of the Position and Rotation keyframes together in the speed graph helps to blend the actions of the two properties together as one. But it also means that lost of small errors can creep into the interpolation if you're not careful. So check all of the bezier handles for all the Rotation keyframes and make sure they didn't get pulled out too hard, or at a funny angle. Images below are from Value Graph, not Speed Graph.



ERROR #2: When you pose characters using Hold Keyframes, it is very easy to accidentally over-rotate the hands or feet and not notice until this point in the process. When hands spin around wildly we call the Helicopter Hands. They are easy to fix, but require you to carefuly check through all of the hand rotation values.

STEP 5: Add Arcs to Position Paths

Humans do not move in straight lines. Our hands, our feet, all of our various parts move along different arcs. Our bodies respond to physics -- they have weight, they are subjected to gravity, etc. If your character only moves along straight position paths then their movement probably looks a little bit robotic. Use the Pen Tool to Arc it up!



STEP 6: Offset Some Keyframes

As a finishing touch, try offestting some of the keyframes to introduce a little randomness into the movement. Remember, we don't move all of our limbs all together in exact synch. Hands and feet slow down and come to a stop seperately from one another, even if just a little bit.