

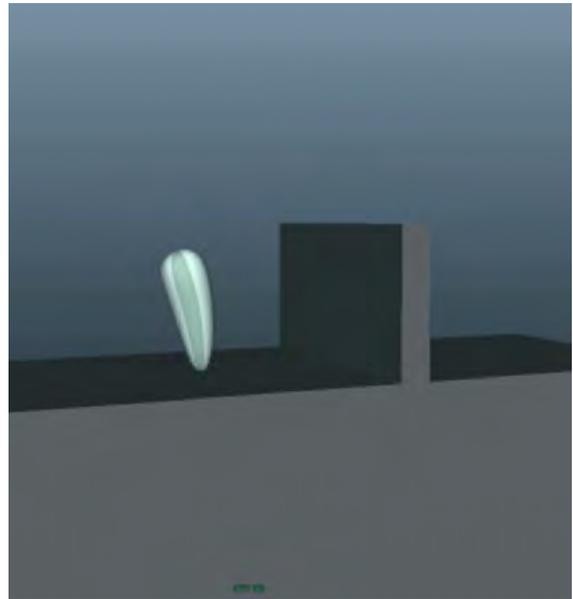
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Animation Principles

Anticipation

ANTICIPATION IS THE PRACTICE of moving a character in a certain way to prepare the character and the audience for the action. Most often, anticipation means moving the character a small amount in the opposite direction of the main action. Since a lot of animation is very physical, many times anticipation is a necessary part of getting the correct physical performance out of the character. For instance, a character jumping must bend his knees first. A pitcher must bring his arm back before he throws the ball. This natural motion that occurs in everyday life is what makes anticipation as an animation principle so effective. We are very accustomed as humans to tracking fast-moving objects by taking a cue from its anticipation, and then looking ahead of the object in the opposite direction. So as animators we must take advantage of this hard-wired trait of humans and use it to our advantage. We can make it so that the audience is always looking at the part of the screen that we want them to, by activating the visual cue of anticipation.

Anticipation also serves a purpose in fine-tuning your performance choices. Disney animator and animation legend Eric Goldberg is known for relating anticipation directly with thought itself. This makes perfect sense; if we see a character really “wind up” for an action, it is clear to us that the character has planned the action well in advance, and is thinking about how to move. On the other hand, if a character moves instantaneously and without warning, the motion comes across as unplanned. Think of the difference between the apparent thought process of Popeye swinging his arm back to punch an unsuspecting Brutus, and Brutus’s head when the fist hits him on the back of the head. Popeye was planning to wallop the big bully, but Brutus was not thinking at all of the fist about to hit him! So as you are working, pay close attention to how much anticipation you are using in your animation. It may just mean the difference between a thinking, planning, and intelligent character, and a character simply reacting to the world around him.

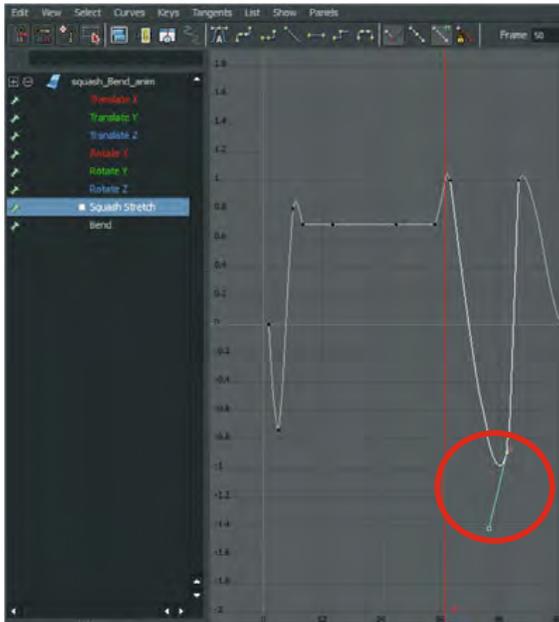


1 Open anticipation.ma. In this scene, a bouncing ball looks at a wall, and then deftly hops over. Play it a few times and see if you can spot the anticipation before the jump.

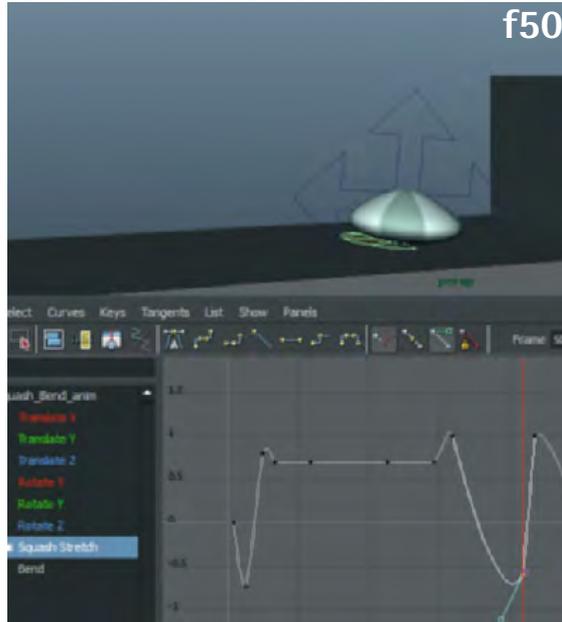


4 Now play with the handle itself! Drag it way out towards the left and playback the animation. See what a different impression you get as to the thought behind the jump? Subtle changes in anticipation can have incredible results.

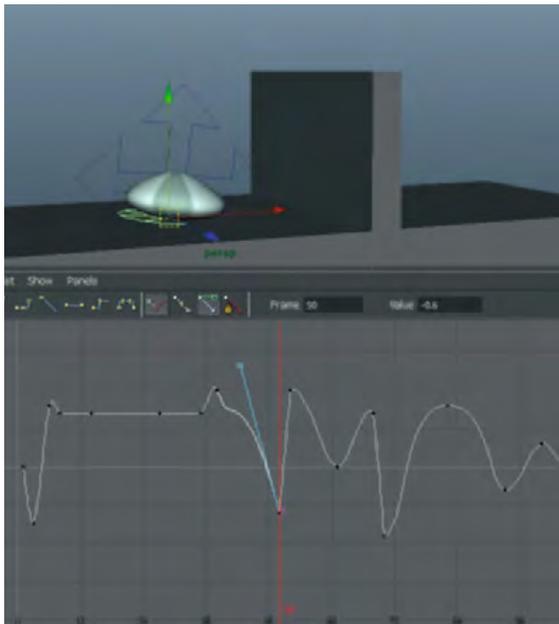
How to Cheat in Maya



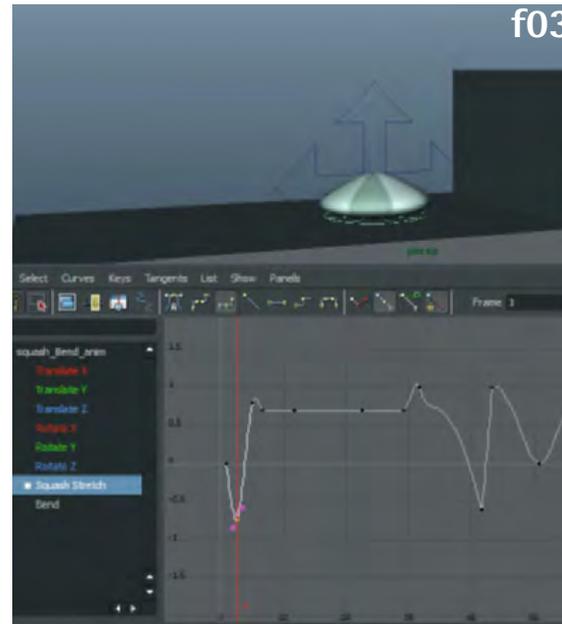
2 If you select the squash_Bend_anim control on the ball, you will see there is a keyframe on the Squash Stretch control at f50 with an unlocked tangent. This is the frame of anticipation. We are going to play with this anticipation and see what looks best.



3 Select the squash_Bend_anim control, and open the Graph Editor. See that keyframe with the unlocked tangent handles? Try moving that key up and down and finding a good size of squash for this anticipation. Watch the animation over and over again to see what looks best. Remember, it's up to you!



5 Or does this look better? Remember, if you keep the number of keyframes you use to a minimum, you can spend more time making adjustments and less time wrestling with technical trouble. What new impression does this anticipation give you? What is the ball *thinking*?



6 At f03 is another little anticipation that I sneaked in. Play with the size and timing of this one as well, and start training your eye to hone in on the most powerful and engaging performance.



anticipation.ma

HOT TIP

Play your animation at speed! We know that timing is vitally important in animation. You get so much more information playing your animation at speed than you do if you just scroll through the timeline.