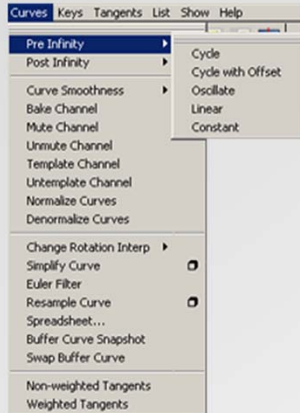


Why Cycle!

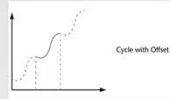
- ▶ It can be pretty intensive during production time to create a full walk cycle. Hollywood and others big production can afford to create unique personality walk, for all along the movie.
- ▶ In TV series and other small production the use of cycling and baking technique can be use to create seamless repetitive cycle.
- ▶ So it allow the animator to do a simple 2 or 4 step walk, then use cycling and baking to allow him to quickly change the rhythm and the repetitive effect of a cycle.
- ▶ The result will give you a easy way to tweak a cycle and made it seamless to the viewer.



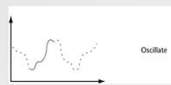
Graph editor ++



Repeats the animation curve as a copy infinitely.



Repeats the animation curve infinitely, except it appends the cycled curve's last key's value to the value of the first key's original curve.



Repeats the animation curve by reversing its values, and shape, with each cycle alternating between backwards and forwards effect.



Extrapolates the value of the first key using its tangent information. It projects a linear curve infinitely beyond.




Maintains the value of the end keys. This is the default setting for animation curves in Maya.


Cycling for Production

Exercise

So how to cycle an animation?

1. Create your animation.
2. All element of your animation have the same key at the beginning and at the ends of the animation.
3. Be sure that your last pose match the first pose in rotation and the translation may be different.
4. Use cycle and cycle with offset to complete the cycle. "PRE and POST"
5. Using **Bake Simulation** convert the animation into real key and make the cycle **not-dependent** of the "INFINITY", so the animation will be unique and easily editable.
6. Now you are free to change any animation you want and make you animation less repetitive and by the same time more unique and with more personality.

▶ cycle_sideJumb_block_Start  .MA

cycle_sideJumb_block_Done  .MA

Goal to achieve:

- Matching the first pose with the last pose
- Be sure of correct frame start and end
- Cycle all controller in "RX, RY, RZ, and TY, TZ"
- For the three main icon who move the character in TRANSLATION X
- Apply a Cycle with offset for the TX
- Look at the cycle and fix needed adjustment
- Bake simulation to convert the INFINITY to normal key
- Change your animation to make it less boring cycling or delete the end of it and create new action.

Bake Simulation

Generates keys and animation curves from other animation types
Such As:

- Inverse Kinematics
- Expressions, Dynamics
- Infinity and Cycling animation
- Texture
- Etc...

Not correct

Correct

You can find this bake Simulation into two location

- Maya / Edit Menu / Bake Simulation
- The Graph Editor / Curves / Bake Channel

Here some of the most important setting for you to know

Hierarchy

Specifies how a keyset will be baked from a hierarchy of grouped or parented objects.

Channels

Specifies the channels (keyable attributes) whose animation curves will be included in the keyset.

Time Range

Specifies the time range of the keyset's animation curves.

Sample By

Specifies the frequency with which Maya will evaluate the animation and generate keys.

Keep Unbaked Keys

This option preserves the keys that are outside the baked time range and only applies to directly connected animation curves. When on, bake simulation does not remove keys that are outside the bake range. When off, only the keys created within the specified time range during the bake will be present on the animation curve after the operation.

Sparse Curve Bake

This option operates only on directly connected animation curves. It produces bake results that create only enough keys to represent the shape of the animation curve.

Disable Implicit Control

This option disables the effect of controls such as IK handles once the bake simulation has been performed.