

Chapter 9 – Animation	2
9.1 Animation Introduction.....	2
9.2 The Animation Editor in detail	3
9.2.1 Story	3
9.2.2 Saving Clips	11
9.2.3 Loading Clips	12
9.2.4 Dope Sheet	13
9.2.5 F Curve.....	15
9.2.6 The Control Panel	18
9.2.7 Animation Preferences Panel	20
9.2.8 Workspace Hardware Settings	22
9.3 The Tutorials	23
9.3.1 Basic Workflow – Simple One Track, One Clip Animation	23
9.3.2 Basic Character Animation - One Track, One Clip	34
9.3.3 Advanced Workflow – Multiple Clips for Blending Actions	37
9.3.4 Advanced Workflow – Reusing Clips for Other Objects	47
9.3.5 Advanced Workflow – Multiple Clips for Skeletons	54
9.3.6 Advanced Workflow – Copying Clips from One Character to Another	58
9.3.7 Different Kinds of Animation	59
9.3.8 Procedural Animation plus Keyframes	59
9.3.9 Using Physics to Generate Keyframes, Part 1	62
9.3.10 Using Physics with Characters.....	65
9.3.11 Using Physics to Generate Keyframes, Part 2	66
9.3.12 Using Physics to Generate Keyframes, Part 3	70
9.3.13 Using Keyframes to Generate Physics, Part 1	70
9.3.14 Fine Tuning a Character Pose Using FK	74
9.3.15 Using the F Curve Editor	75
9.3.16 Interpolation	76
9.3.17 The Pass Through Parameter	87
9.3.18 A Little More About Additive Mode	89
9.3.19 Ensuring Nothing Happens Between Two Keyframes	90
9.3.20 Putting it all Together	92
9.4 Morphs	97
9.4.1 The Morph Panel.....	97

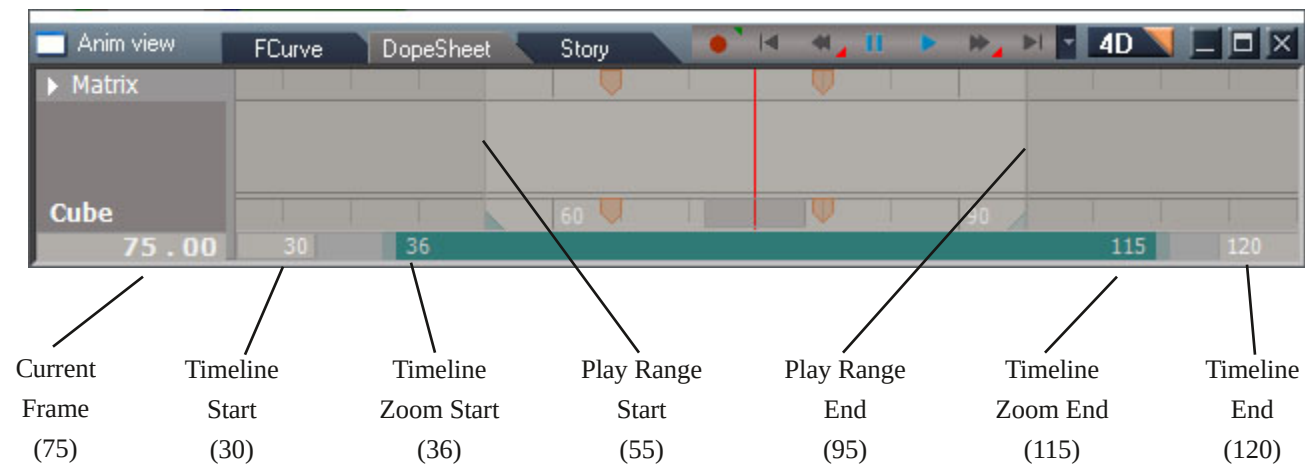
Chapter 9 – Animation

9.1 Animation Introduction

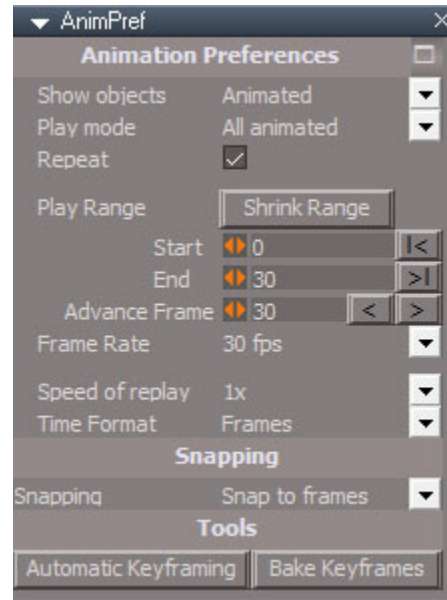
This chapter documents the new animation tools found in the Workspace (it does not cover the animation tools such as the KFE and similar that are found in the Model side). The Workspace features a powerful range of tools for creating animation which will let you work with physics simulation, skeletons, keyframed animation, and imported motion capture via BVH. You can in fact flexibly combine all of these different types of animation, giving you many different ways to achieve exactly what you are looking for.

The chapter begins with a look through each of the tools associated with this process, and then moves on to some introductory tutorials that take you through some ways of creating animation in trueSpace.

9.2 The Animation Editor in detail



9.2.7 Animation Preferences Panel



Chapter 9.2.7 Error

"Play Range Start and End – This defines the start and end of the animation. Note that this is the same as setting the start and end points using the numeric fields at the bottom of the Animation Editor window. Updating those fields in the Animation Editor window will update the fields here on this panel. Note however that updating the fields on this panel will not redraw the Animation Editor window."

It is not the same as setting the start and end points using the numeric fields at the bottom of the Animation Editor window. It is the same as dragging on the play range handles and it does redraw in the Animation Editor window when updating the fields.

Note that the Play Range is limited to values within the min and max values of the animation range start and end.

By default the Animation Range are the set of frames that get rendered. Play Range is for previews.

The **small button** upper right next to the title will open the Animation Preferences in a floating window.

Shrink Range : set the timeline start and end to match the current preview play range

|< : set timeline start to 0, does not effect the play range

>| : set timeline end to 300, does not effect the play range

Advance Frame : number of frames to move the current time with each press of the arrow buttons



Automatic Keyframing : open the Automatic Keyframing panel

move, rotate or scale an object or dynapose an actor to get automatic keyframe generation.

IK handles don't create a key, but the act of just selecting a joint after adjusting a handle is enough to make it reevaluate causing a small motion in the joint and create a key for the skeleton.

If a joint is already selected just touching the transform widget is enough to get a key.

Bake Keyframes : open the Bake keyframes panel

Set the animation play range to determine what keys get baked

Adjust the **Period** value to give scripts time to run before a key is set

Select the item to bake and push the **Bake Selected Object** button

Alternative workflow:

Uncheck **Use timeline play range**

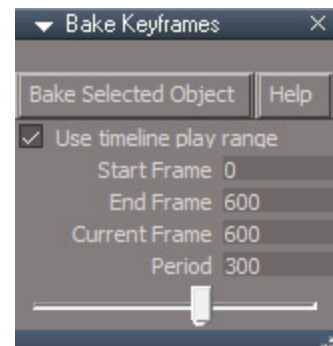
Start Frame – set first frame to key

End Frame – set last frame to key

Current Frame -

Period – delay between keyframe times

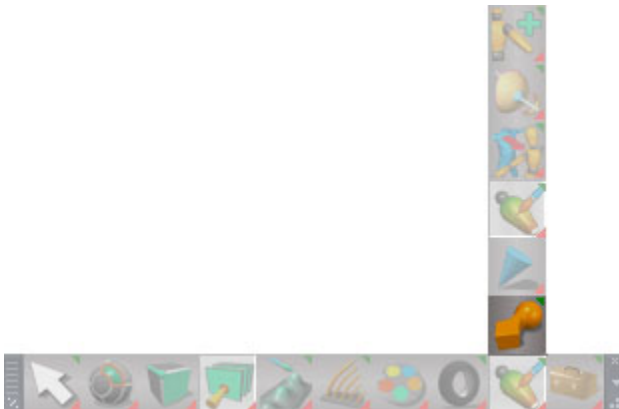
Select the item to bake and push the **Bake Selected Object** button

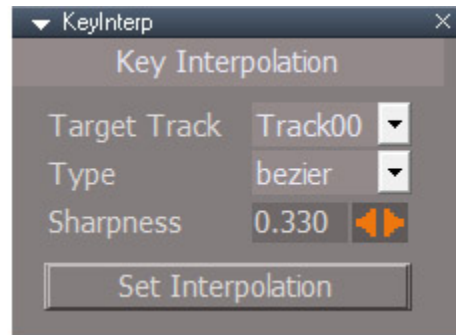


A keyframe will be created at every time frame for the object.

If the object is controlled by a script, remove the command script before rendering. Command scripts do not render.

Baking the keys makes it possible to render an animation created by command scripts.





record - button will create a new keyframe using the chosen interpolation type. right click opens the keying panel
other buttons from left to right are bezier, linear, flat, start and end. . These change the interpolation of selected keys
right click to open the interpolation panel

Target Track - the destination track for new keyframes. Not used when both type is bezier and sharpness is 0.33 (the trueSpace defaults for new keyframes). This setting can also be ignored if the item has only one animation track.

Set Interpolation - button will set the interpolation type for the selected keyframe(s)