



tradigiTOOLS

The traditional workflow
plug-in for modern animators.

Introduction

Thank you for downloading tradigiTOOLS! We here at FUNhouse Interactive have spent a lot of time working on this tool to bring the best traditional workflow methods possible to Maya.

At first, the tradigiTOOLS workflow may seem a little foreign to people who have only been trained in 3D computer animation. However, once you've learned how to apply traditional methods to a 3D workflow, we're certain you will increase your productivity and find animating fun again.

About tradigiTOOLS

TradigiTOOLS was designed with one goal in mind: to bring the methods and tools that traditional 2D animators employ into the 3D world. The interface is set up to allow quick access to the most used tools, while providing the user with the ability to configure tradigiTOOLS preferences to adapt to each individual's style.

Please make sure you have the latest version of tradigiTOOLS available before installing, as updates fix issues found by users and add compatibility with new patches in Maya. The latest version is always available from <http://www.funhouseinteractive.biz/>.

System Requirements

At present, tradigiTOOLS will run on the following systems:

Maya

Maya 7.01, 8, 8.5 SP1, or 2008 SP1. Please make sure you are using the proper service pack on 8.5 and 2008, as the service packs fixed bugs that created problems with tradigiTOOLS.

Mac OS X

Mac OS X (Leopard) 10.5.2 or greater

Mac OS X (Tiger) 10.4.11 or greater

Windows

32-bit: Windows XP SP2 or greater,
Windows Vista (All versions)

64-bit: Windows XP-64, Windows
Vista 64 (All versions)

Linux is not currently supported.

Installation

Before installing, it is crucial that you close all open instances of Maya.

To install, simply double-click the tradigiTOOLS_V1_20_Mac.pkg file on Mac or the tradigiTOOLS_Win32_All.exe or tradigiTOOLS_Win64_All.exe installers on Windows. After installation, you'll need to copy the tradigitools.lic file you received in your email upon purchase into the FUNhouse/tradigiTOOLS folder that was created at installation. The following are typical locations for the folder:

Mac /Applications/FUNhouse/tradigiTOOLS/ (always on the main boot drive)

Windows C:\Program Files\FUNHouse\tradigiTOOLS

 C:\Program Files (x86)\FUNhouse\tradigiTOOLS

Under Windows the installer will note the installation directory at install time; even though you are offered a chance to change this directory, please do not change it as it has been known to cause problems. The Mac version does not offer the user a choice of installation folder.

If you downloaded the Studio version of the plugin, you'll find the Mac and Windows installers bundled together inside the zip file; simply use the correct one on your respective computers.

Also on Windows, there is a known issue with the license key file not being recognized because it has been renamed. Even if the file looks like it is named "tradigitools.lic," some email clients and web email services will append a ".txt"

extension to the file, making the tradigiTOOLS plugin unable to find the file. If your license file is in the FUNhouse/tradigiTOOLS folder and is not being recognized, please change your Explorer view settings to show all file extensions. This can be found under Folder->View Options in Windows XP, and Organize->Folder and Search Options in Vista.

Using tradigiTOOLS – A Note on Poses

When we talk about poses, we mean that on any one key frame, all controls on a character have been keyed. The tradigiTOOLS workflow is set up to take advantage of all controls being keyed, just like a full drawing in traditional animation. However, the tool is flexible enough to be used with other methods.

The best way to describe poses is this: think of the image of your 3D character on the screen not as a 3D character, but as a 2D drawing. When characters are rendered, all of the data like animation channels and geometry is flattened into an image displayable on-screen; the 3D becomes 2D. All good animators will recommend thinking of the 3D character as a 2D drawing for this reason. However, by doing so, you are also freeing yourself from many of the problems that plague 3D animation.

Take, for instance, retiming. Very few shots, if any, have good timing right after the blocking phase. After receiving comments on blocking, it is very common to go back and re-time sections (if not the whole animation). If all used channels on all elements of a character are keyed, then it's easy to pick up an entire "drawing" and move it left or right in the timeline. It's also easy to remove drawings altogether (as some retiming requires), or to swap the positions of drawings. If, however, a main key pose on your timeline does not have all its channels keyed, it relies on what comes before and after it in order to create that 2D drawing. As such, retiming can destroy the poses you've created.

TradigiTOOLS expects the user to key all parts of the character that are animated on every key pose. Once you get into the habit of doing that, you'll find the benefits outweigh the down sides of this

modern machines the difference in speed will be negligible. This is on by default.

Restore Window Focus

The focus will return to the last window selected before running a command in the tradigiTOOLS interface. This is on by default.

Options - Breakdowns

Ignore All / Object / Attribute

Animation channels without keys cannot have breakdowns inserted, as breakdowns must be set between two existing keys. These three options determine how tradigiTOOLS reacts when it finds a channel without keys. You can choose to have the setting of the breakdown effect nothing at all (Ignore All), ignore only the object that has the empty curve (Ignore Object) while setting breakdowns on all other objects, or ignore only the empty curve (Ignore Attribute) while setting breakdowns on all other curves on that object. This is set to *Ignore All* by default.

Skip Ripple Check

When in ripple mode, the default behaviour is to verify that all attributes have a key set at the current time or all keys have no keys set at the current time. The ripple breakdown will fail if this is not the case unless the check is disabled. This option is enabled by default.

Options - Camera

Include Ortho Cameras

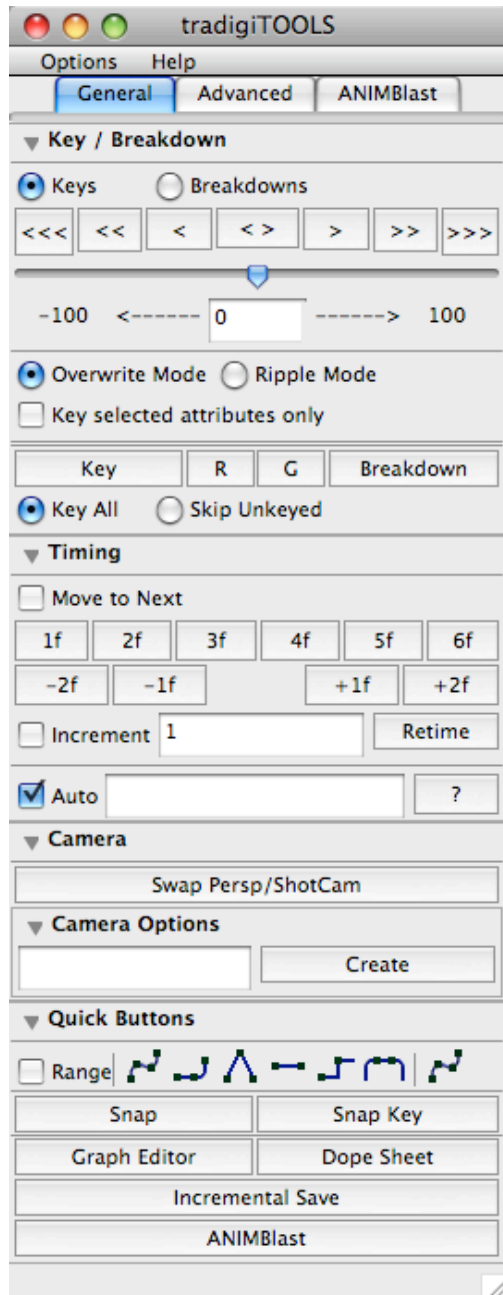
If you right-click on the Camera Options text box, you'll get a menu of available cameras in the scene that you can use with the Swap Persp/

ShotCam button. If you want this list to include orthographic cameras, turn this option on. This option is off by default.

Help - About tradigiTOOLS

This pops up a windows showing version and copyright information for the plugin.

General Tab



Keys / Breakdown Section

Keys and Breakdowns Radio Buttons

Favor Buttons

Slider

Numerical Input Box

Overwrite Mode and Ripple Mode

Key Selected Attributes Only

Key / R / G / Breakdown Buttons

Key All and Skip Unkeyed

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Retime Box and the Incremental option

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Camera Section

Swap Persp / ShotCam

Camera Options

Quick Buttons Section

Tangent Type Buttons

Quick Buttons

The General Tab is the workhorse of tradigiTOOLS. It contains efficient tools based on traditional animation workflows.

Key/Breakdown Section

Keys and Breakdowns Radio Buttons

When using the favor buttons, slider, or numerical input box, the Keys and Breakdowns options select the type of key you'll be setting. Keys are represented by red ticks, and breakdowns are represented by green. These are only a visual reminder to the animator when using the timeline, and are not related to Maya's Breakdown functionality. Keys mode is selected by default.

Favor Buttons

The favor buttons set keys or breakdowns between two previously set poses. The buttons have preset values. The middle button sets a breakdown exactly between two poses; in other words, it's a 50/50 blend between the two poses. The buttons on the left favor the previous pose -- the new breakdown will look more like the previous pose. The further away from the center button, the more the previous pose is favored. The buttons on the right favor the next pose in the same way.

Slider

The slider works in the same way that the favor buttons do, but gives the animator more control over how much the new breakdown will favor the desired pose. Moving the slider to the right favors the next pose and moving to the left favors the previous pose.

Numerical Input Box

The input box allows the animator to type in a numerical value instead of relying on the favor buttons or the slider. When "0" is typed in and enter/return is pressed, a new breakdown will be set directly between two poses (just like the middle favor button). Positive values up to 99 favor the next pose, and negative values down to -99 favor the previous pose. If you want to copy either the next pose or the previous pose, type in 100 or -100 respectively.

Overwrite Mode and Ripple Mode

Overwrite mode is selected by default. When in overwrite mode, any changes made to poses through the tradigiTOOLS interface automatically replace the pose on the current frame. If you want to set a new pose between two poses that are on concurrent frames (for example, Frame 1 and Frame 2), ripple mode can be used to shift over the pose on the next frame (and all poses afterwards) by one frame. It then creates a new pose on the frame after the current frame, and moves the play header to this new pose.

Key Selected Attributes Only

When this option is checked, it will force tradigiTOOLS to key only attributes selected in the Channel Box. It will key selected attributes for all selected objects that have those attributes in common. Objects that do not have those attributes will be ignored.

Key / R / G / Breakdown Buttons

The Key and Breakdown buttons are shortcuts to the standard Set Key command in Maya. The Key button will set new keys with red ticks, and the Breakdown button will set them with green ticks. The R and G buttons can be used to change the color of a previously recorded key on the time slider without the need to re-set the key or breakdown.

Key All and Skip Unkeyed

The Key All option is selected by default. This option keys all selected controls and all of their attributes, similar to setting a key in Maya, when using the above buttons. Skip Unkeyed keys only channels on selected objects that have already been keyed, ignoring all channels with no key frames.

Timing

The Timing section contains a set of buttons that help the animator adjust the timing of a scene more quickly and efficiently than the standard tools allow.

Move to Next option

When checked, the move to next option moves the playhead to the next pose after any timing function.

Quick Timing Buttons

The quick timing buttons allow animators to easily set the number of frames between two poses. When these buttons are pressed, the number of frames between the two poses you're currently working on gets set according to the number on the button. For example, the 3f button sets the number of frames between two poses to three. All keys following the next pose will ripple over accordingly to accommodate the timing changes.

Subtract and Add Buttons

These are similar to the quick timing buttons, but instead of setting the number of frames between two poses they add or subtract one or two frames.

Retime Box and the Incremental option

This input box allows the animator to choose the exact number of frames when retiming two poses. Typing in a number and pressing the Retime button will automatically space out the poses on the timeline according to the specified number. Selecting the Increment option will allow the animator to add or subtract the specified number of frames instead of altering the timing to the exact number of frames.

Information Box

This box identifies the number of frames between two poses. Every time the playhead on the time slider changes, a note will appear in the information box telling the animator how many frames the current or previous key is held for. The Auto option is on by default; unchecking it will require the animator to press the ? button in order to update the information in the box.

Camera

Swap Persp / ShotCam

This button quickly swaps between the Maya Persp camera and an optional shot camera. The camera can be chosen under Camera Options.

Camera Options

Using the text box, you can choose a camera as your ShotCam. You can type the name in, or by right-clicking a menu will appear that will allow you to select a previously created camera from your scene. (Orthographic cameras are not on this list by default; this behavior can be changed under Options->Cameras.) Clicking the Create button will add a new camera to your scene. If a name is specified, the new camera will be created with that name; if not, the new camera will be called ShotCam. The camera is always created at the origin.

Quick Buttons Section

This section is designed to expedite access to useful functions and features.

Tangent Type Buttons

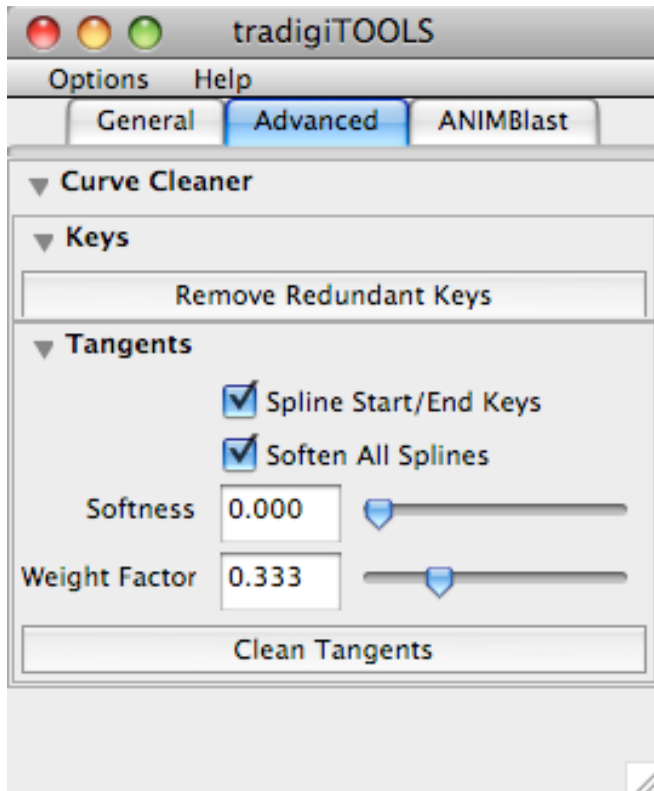
These buttons let the animator set the tangent types on all selected objects. All six types that are settable from within the graph editor

are available. The Range checkbox, when checked, will limit tangent type changes to the currently visible range of frames on the time slider. When frames are selected on the time slider, these buttons will only affect the highlighted poses regardless of the Range checkbox. The button on the far right is special -- it allows the animator to set the default tangent type when creating new keys. Click it once, then click one of the other tangent buttons. Its icon will change to the new type, and all keys set afterwards will respect this new default.

Quick Buttons

Snap and Snap Key are different from the Maya time slider snap. Snap snaps one object to another. Snap Key also snaps one object to another, but it then keys the snapped object at its new position. Please note that neither Snap button applies any constraints. The Graph Editor and Dope Sheet buttons open the Maya graph editor and dope sheet windows, respectively. The Incremental Save button saves a new copy of your scene, renaming the file with a dot and three digits at the end. (For example: my-scene.000.ma, my-scene.001.ma.) If you've checked the Incremental Save checkbox in the Save Scene Options panel, then the tradigiTOOLS Incremental Save button will use Maya's incremental save method instead.

Advanced Tab



Curve Cleaner

Remove Redundant Keys

Spline Start / End Keys

Soften All Splines

Softness

Weight Factor

Clean Tangents Button

Keys – Remove Redundant Keys

This section has button for removing redundant keys from your animation without affecting inbetweens. Note that this function should not be used until all animation has been completed, as removing keys breaks poses.

Tangents

The options in this section are used for cleaning splines. They remove overshoots by flattening tangents on peaks and valleys. They can also adjust the interpolation of the tangents to help smooth graphs out. Note that this is a starting point only, and further editing may be required afterwards.

Spline Start / End Keys

When checked, the tangents of the start and end keys will be aligned to the spline. If unchecked, the start and end keys will have their tangents flattened.

Soften All Splines

When checked, the tangent cleaner will soften all keys in a channel. When unchecked, only keys immediately surrounding peak and valley keys will be softened.

Softness

This value effects how much the cleaner will try to adjust the keys. The higher the value, the softer the splines. A value of 0.5 is the same as basic Maya interpolation. Any value over 0.5 exaggerates overshoots. A value of 0.1 is a good starting point. There isn't one default value that works for all curves, so experimentation will be needed to find the most pleasing result.

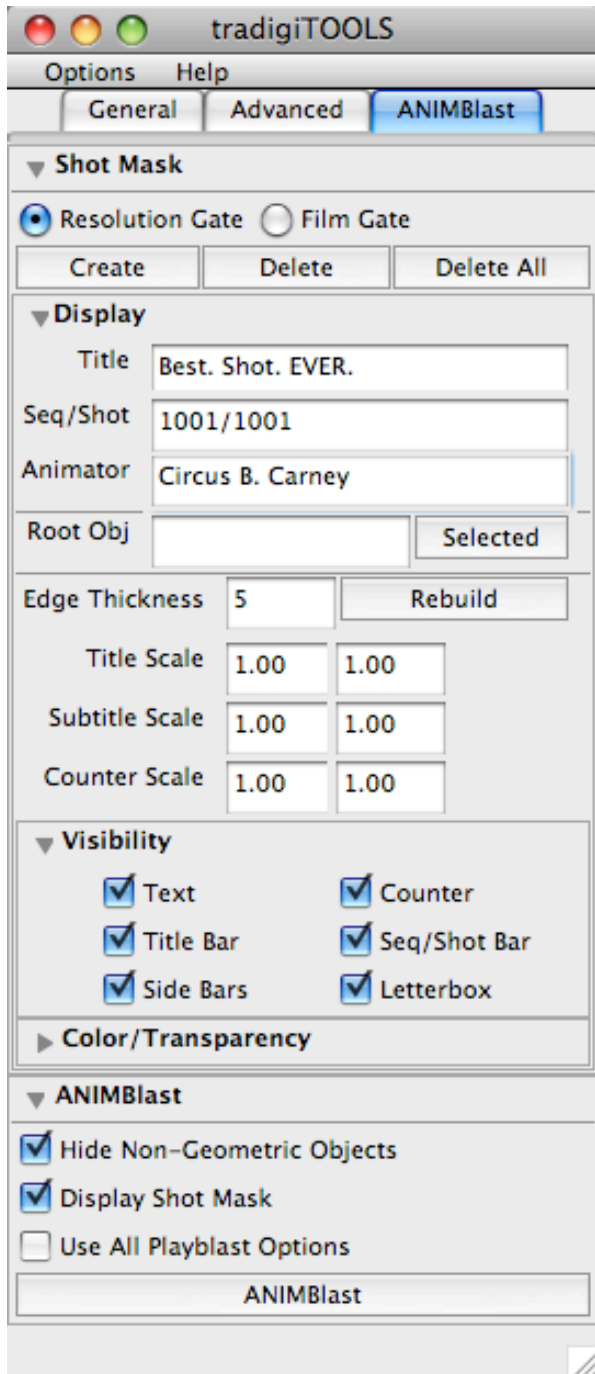
Weight Factor

This will soften tangent weighting if you use weighted tangents. Experimentation will be needed as no one value works for all curves. If you do not use weighted tangents, this value is ignored.

Clean Tangents Button

Pressing this button will clean tangents on the selected objects based on all the options above.

ANIMBlast Tab



Shot Mask Section

Resolution / Film Gate

Create / Delete / Delete All

Display Section

Root Obj

Edge Thickness

Scaling Area

Visibility and Color / Transparency

ANIMBlast Section

Hide Non-Geometric Objects

Display Shot Mask

Use All Playblast Options

ANIMBlast Button

This tab combines shot mask and playblast functionality to streamline the process of creating playblasts for review.

Shot Mask

A shot mask is an easy way to showcase your work to your peers, supervisors, mentors, and others, with all the pertinent information in-frame to assist them in giving criticism. Frame numbers are rendered over ANIMBlasts, and other information, like the animator's name and scene identifiers can be displayed as well.

Resolution / Film Gate

Resolution Gate is selected by default, and should be adequate in the majority of situations. When selected, created shot masks will mask out everything outside the render resolution set in your Render Settings. If Film Gate is selected, then a shot mask will be created within the renderable area (within the resolution gate) that matches the camera's film back aspect ratio.

Create / Delete / Delete All

Pressing the Create button will create a shot mask on your scene camera. The camera must be active for this to work. (Make sure your 3D scene has mouse focus, and not any other Maya windows, before pressing the button.) Scenes may only have one shot mask at a time, regardless of the number of cameras. When a new shot mask is created, it will replace any found in the scene. The Delete button removes a shot mask from a scene. The Delete All button not only deletes the shot mask, but also the settings for the mask that are saved inside your Maya file with the scene.

Display

The Display section holds the customizable labels for the shot mask. They are Title, Seq / Shot, and Animator's Name. While the labels are titled for specific uses, any text can be entered.

Root Obj

This box can hold the root object(s) for the playblast. When root objects are specified, shot mask frame numbers are colored according to root object key types. On frames where the root object has a key pose, the key pose color circles the frame number. On frames where the root object has a breakdown pose, the breakdown color underlines the frame number. These colors can be adjusted to suit user preferences. (See Visibility section.) Clicking the Selected button while objects are selected will set the root object to the selection. To reset the selection, deselect everything in the scene and press the Selected button again.

Edge Thickness

This value controls the thickness of the safety zone around the perimeter of the shot mask. The minimum value is 2, and the maximum is 15. The default is 5. Changing the edge thickness of the safety zone also changes the size of the displayed text labels and of the frame counter.

Scaling Area

This scales the title, sub-title, and frame counter up or down in relation to the edge thickness. You can scale on both the X (left to right) and Y (up to down) axes.

Visibility and Color / Transparency

These two sections allow the user to further customize the look of their shot mask by setting the visibility of shot mask pieces and / or altering the colors and transparency. You can remove a shotmask item by unchecking its box.

ANIMBlast Section

All options in this section only have an effect when ANIMBlasting, not PlayBlasting. ANIMBlasts have the benefit of being cropped to

the resolution gate regardless of how the shot mask appears in your 3D viewport. ANIMBlasts also remove all extraneous HUD elements.

Hide Non-Geometric Objects

When selected, this hides all objects that are not geometry (nurbs, polygons, and subdivision surfaces will be the only objects visible). This is checked by default.

Display Shot Mask

This is on by default. If you want to disable the shot mask without deleting it from your scene, then uncheck this box.

Use All Playblast Options

Off by default, this makes ANIMBlasts use the options in your PlayBlast configuration in addition to the shot mask and ANIMBlast options. In most situations it's better to leave this box unchecked.

ANIMBlast Button

This creates a special playblast based on the options in the ANIMBlast section.

Final Notes

We hope you enjoy using tradigiTOOLS in your everyday animation workflow. If you have any questions or issues, or just want to have a chat with the FUNhouse Carnies, please stop by the community forums at <http://forums.circusink.com/>.

Version History

v1.20

- Support for Blend Nodes
- Support for Character Sets
- Parenting to the Camera is now supported for the shotmask
- **Windows only:** 64-bit support for Maya-64 on XP-64 and Vista-64
- **Mac only:** Maya 8.5 and Maya 2008 plugins are now Universal Binaries. There is also now only one Mac installer.

v1.11

- A shotmask can now be successfully created for all of the "Fit Resolution Gate" types (Horizontal, Vertical, Fill and Overscan).
- Shotmask details can now be saved with the scene. tradigiTOOLS will automatically update when a scene is loaded with saved details.
- A "Delete All" button was added to the shot mask creation. Using it will delete both the shotmask and the stored shotmask details.
- An ANIMBlast button was added to Quick Buttons section.
- Scaling for the shotmask text is now available. Scaling can be accomplished in the X and Y directions independently.
- Fixed a Key/Breakdown issue that could potentially set a key that was a copy of the previously set key.

- Fixed a clipping plane limitation that could potentially keep the shotmask from being rendered.

v1.01

- Original Release

KNOWN LIMITATIONS:

1. The shot mask may not display correctly if the camera's Lens Squeeze Ratio is not equal to 1.
2. ANIMBlast will not dynamically update the shot mask if the camera's focal length has been animated over the course of a shot.
3. ANIMBlast may playblast to the wrong size on a fresh install of Maya. Creating a single regular playblast should remedy this on all subsequent ANIMBlasts.
4. The text on the shot mask may display as blocks on a fresh install of Maya. One time creation of text should solve this problem (Create -> Text). You may also have to check the options box for text creation and make sure that type is Poly, quads are chosen, tessellation method is General, and under initial tessellation controls, make sure that both combo boxes are set to "Per surf # of iso params in 3D."

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