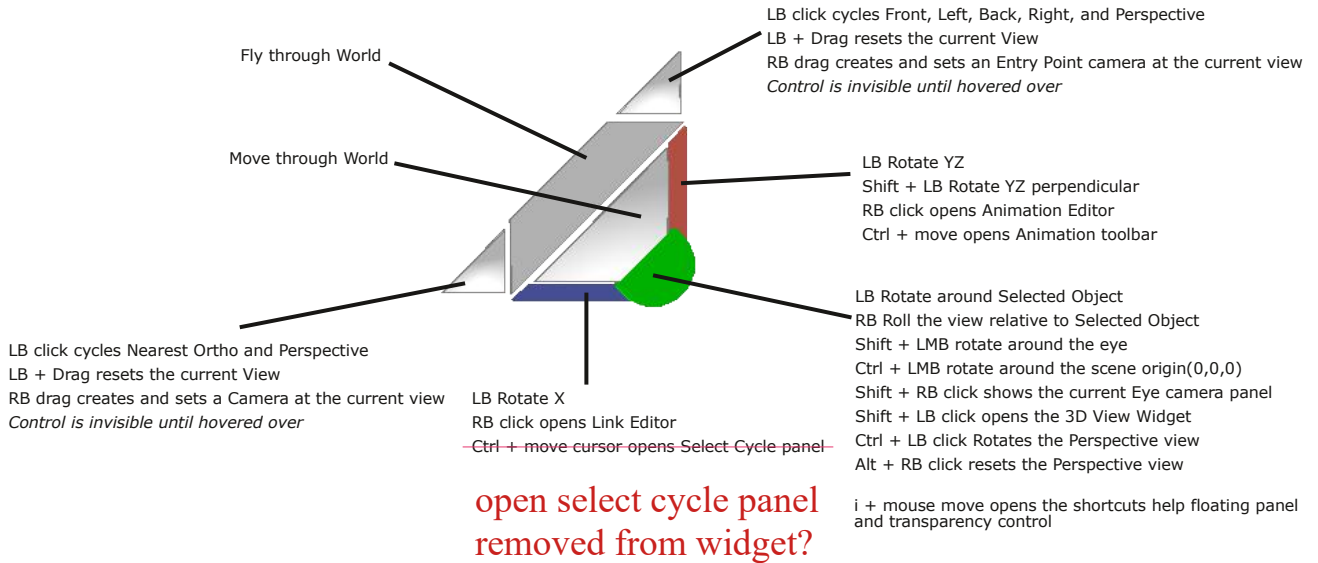


View Navigation Controls



Cube View Widget

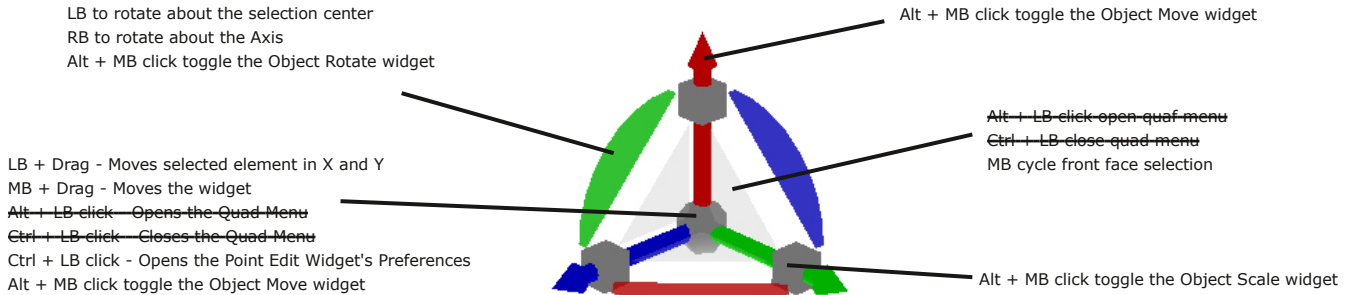
[More Information](#)



3D View Widget

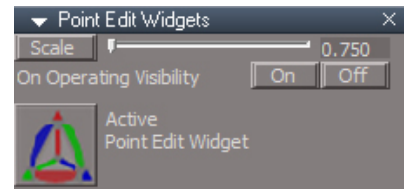
[More Information](#)

Point Edit Navigation Controls



Bars, Triangles, Cubes and Arcs

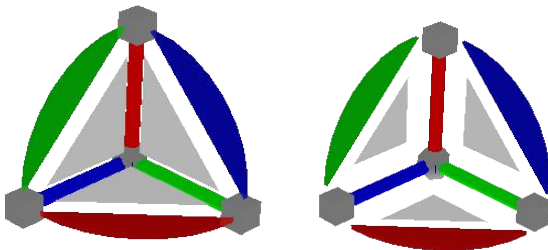
Ctrl + LB click opens their Mouse settings
 P + LB click sets the Axis to the selected Face, Edge, or Vertex
 P + RB click moves and rotates the Axis to the selected Face
 P + MB click moves the Axis to object center and rotates the Axis to the selected Face
 Period + LB click - Hides UnSelected elements
 Comma + LB click - UnHides All elements
 O + LB click Toggles - Mesh Object Coordinate Mode
 Alt + LB click toggle X, Y, and Z Axis locking



Scale - resize the widget
 On Operating Visibility -
On = can see the widget element while dragging
Off = widget invisible while dragging

Shift + LB click in empty 3D Space deactivates Object widgets - Move, Rotate, Scale

Shift + LB click any surface = switch to other Point Edit Widgets



i + drag any surface = Opens the widget's Additional Shortcuts Help floating panel

pe and nav widget preferences/settings - On Operating Visible on/off clears undo history and only effects the active widget

CTRL SPACE = Point Edit Widget Toolbar

Synchronize - Default aspect

When truespace 7.61 was released a bug was introduced that prevented workspace animations from rendering in the modelside renders. The object animations did not transfer through the bridge.

The Synchronize script was created to enable the rendering of Workspace animations from Modelspace.

Usage:

Create an animation in Workspace

Set the timeline to the desired range and start the Synchronize.

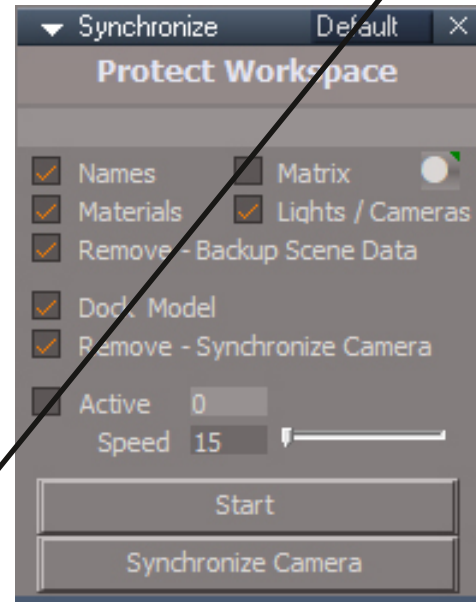
A modelspace window will open with the same view as workspace.

Uncheck AutoRecord to avoid adding new keyframes.

Render Scene to File, select "Workspace" in the Animation section.

Set all other fields and start the render.

When the render is complete you can press Restore.



The Protect Workspace settings section values will override the Protect Workspace node values while the synchronize process is active. *see the previous page for more on the Protect Workspace*

Record Keyframe - LMB will add a matrix keyframe to every mesh object in the scene at frame 0 that does not have any keyframes. Matrix must be set in the keying panel. RMB go to earliest key

Dock Model - will dock the model view after opening it

Remove Synchronize Camera - deletes the camera named Synchronize Camera from the scene during the protection backup step.

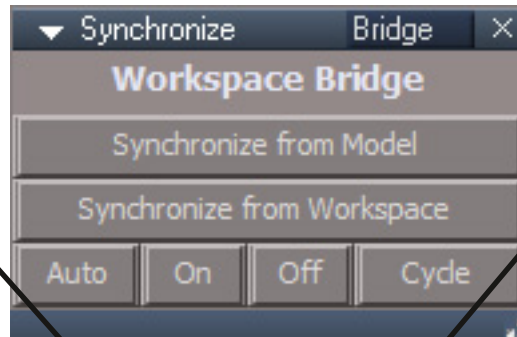
Active - indicates that the synchronize process is active

Speed - controls how often the synchronization occurs, number of syncs per second

Start/Restore - opens a model view, shrinks the play range to keyframes of all the scene items, adds a SynchronizeCamera to the scene and sets the model and workspace to use the synchronize camera.

Synchronize Camera - adds a Synchronize camera to the scene, matches the camera to the active workspace 3D view and sets the open model view and the active workspace 3D view to use the camera.

Synchronize - Bridge aspect



Synchronize from Model is the same as turning the bridge Off then to Auto and automatically pressing the Content synchronization dialog button labelled "Sync from Model".

Synchronize from Workspace is the same as turning the bridge Off then to Auto and automatically pressing the Content synchronization dialog button labelled "Sync from Workspace". This script also fixes a bug in the trueSpace synchronize commands that causes objects to be renamed if more than one object is selected.

Off, On, Auto sets bridge switch value using buttons instead of the desktop panel dropdown. The operation is the same as the desktop panel versions except it will not run if more than one object is selected in order to bypass the trueSpace synchronize bug.

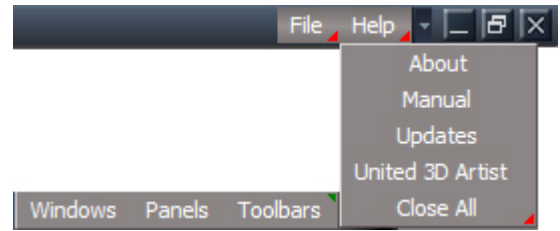
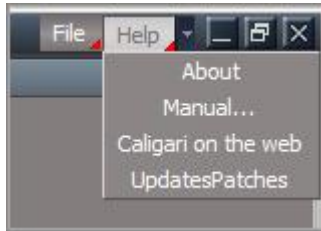
Cycle is the same as setting the bridge switch value to Off and then Auto. This will not run if more than one object is selected.



The trueSpace "synchronize bug" presents itself if more than 1 object is selected when the bridge synchronize from workspace is run. The selected objects will be renamed to include a comma and number postfix. Each time the synchronize is run the number will increment. The reason for the bug is that when more than 1 object is selected in modelspace it will create a temporary "Selection" group to hold the objects. Workspace cannot see the modelspace "Selection" object.

Export > Patch - save a NURBS patch as an ascii format cob file, the first selected object will export.

Import > Patch - load a trueSpace cob ascii format file that contains NURBS patches



Help: About

This displays the trueSpace splash screen with the programming credits, the version information, and the display mode in which trueSpace is running. The Unofficial Update version first shows a popup dialog with version information.

Help: Manual

This will take you to the contents page of the PDF version of the manual you are reading now.

Help: United 3D Artist

Open a web browser to the United3DArtists forum.

Help: Updates

Open a web browser to the United3DArtists trueSpace Unofficial Updates sub forum.

Help: Close All Windows

Close all open floating windows. No effect in the 4View layout.

Help: Close All Panels

Close all open floating panels.

Help: Close All Toolbars

Close all toolbars, floating panels and floating windows This will also close the toolbar in the lower left of the all non-floating 3D windows. A dialog box will show giving the option to reopen this toolbar for the main 3D window. RMB will reset all toolbars. ⚠ This will take a long time to run.



Encapsulate Objects - RMB open the UnEncapsulate panel



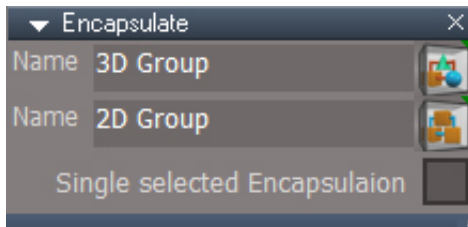
Encapsulate in 3D - RMB open the Encapsulate panel



Unencapsulate Objects The Unencapsulate tool, breaks a group apart.
RMB open the UnEncapsulate panel

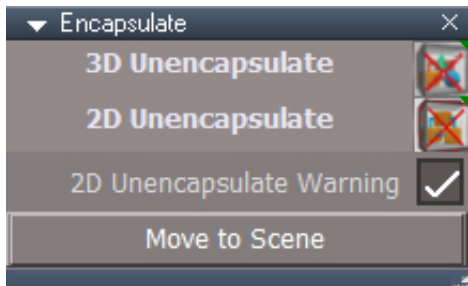


Unencapsulate in 3D The UnEncapsulate In 3D tool breaks a group apart and cleans up extra nodes that were used by the 3D group.
RMB open the UnEncapsulate panel



The panel buttons allow you to name the new group before creating it. RMB for both buttons opens the Unencapsulate panel.

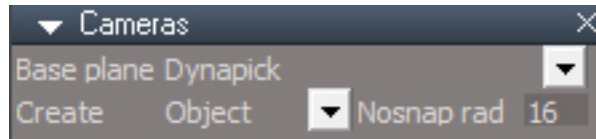
Single selected Encapsulation - allows making a group with a single member.



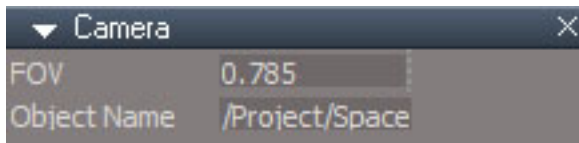
Panel buttons seem to be identical to the toolbar Unencapsulate and Unencapsualte 3D buttons. RMB for both buttons opens the Encapsulate panel.

2D Unencapsulate Warning - uncheck to remove the warning every time you disassemble a group.

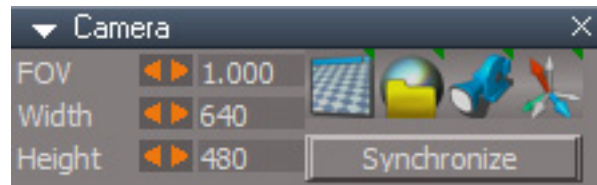
Move to Scene - move the selection from inside a group in the scene to the scene level



Nosnap rad - sets a radius where snapping cannot occur when creating primitives with snapping enabled. To override and force snapping press the ALT key. *This setting does not seem to be working.*



Camera panel



Unofficial Update Camera panel



Camera - Create a camera in the scene facing in the negative Y direction. The camera has a FOV of 0.785 by default.

The Unofficial Update version of the camera has extra buttons and the Object Name is not shown in the panel.

The camera FOV units are in radians and is measured in the vertical direction by default. trueSpace default of 0.785 radians is about 45 degrees, that translates to 22.5 up and 22.5 down.

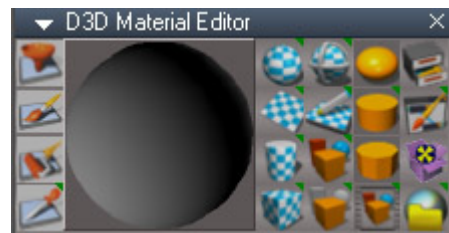
5.3 Workspace Material Editor

D3D Material Editor

Basic Painting Tools:



Material Editor



Unofficial Update Material Editor

Library Places
"D3D materials" p
Library Places. T

Library Places
Selection list. "D3
material and sha
creating material



Spherical UV Projection



Planar UV Projection



Cylindrical UV Projection



Cubic UV Projection



Shrink Wrap UV Projection



UV Editor



Render Scene



Render Object



Smooth Normals



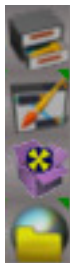
Autofacet Normals



Facet Normals



Render Animation



Update Library Places



Edit DX Material in Link Editor



Convert Direct3D Materials/ Components toolbar



Render to File

-  **Inspect:** Right-click Edit DX Material in the link editor.

Right click same as the left click Edit DX Material in Link Editor button above.

Left-click on any face using a particular material you want to make active in Material Editor.

Left-drag to select an object

Right-drag to open the selected material in the link editor and exit the inspect tool

Shift + move mouse to open the scene in the link editor

Offline Render Engines

YafaRay Information

January 31, 2021

<https://github.com/YafaRay/libYafaRay>

Is the where new development for YafaRay can be found

<https://github.com/YafaRay/Core/releases>

Is where the final release, v3.5.1, can be found

The Unofficial Updates comes with hooks for the YafaRay Render engine installed. YafaRay can be installed anywhere on the machine. If it is placed in one of the predefined locations it can be found via the options setup panel automatically. See the Unofficial Update installation instructions for more details or activate the YafaRay renderer and open the help file from the toolbar.

Predefined YafaRay installation locations:

C:\Program Files\Bforartists 1.0.0\2.79\scripts\addons\yafaray_v3\bin\yafaray-xml.exe

C:\Program Files\Blender Foundation\Blender\2.79\scripts\addons\yafaray_v3\bin\yafaray-xml.exe

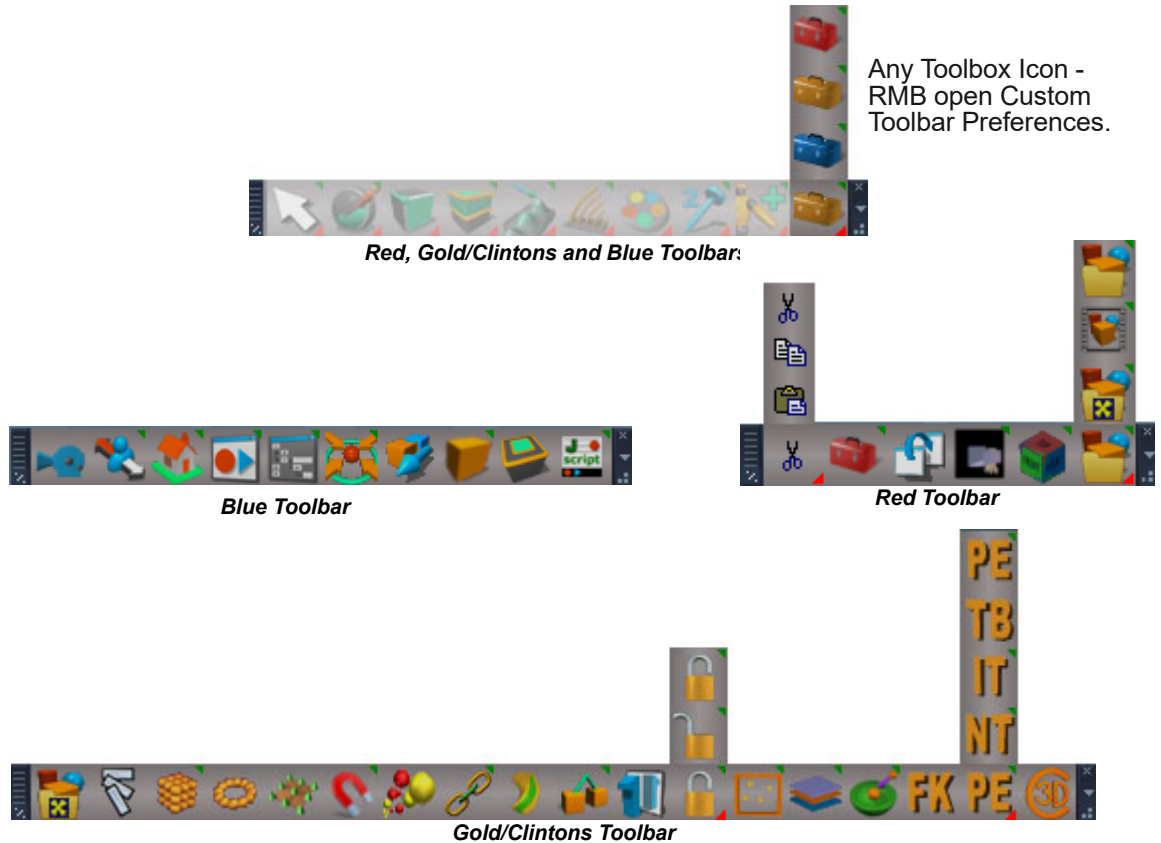
C:\Program Files\yafaray_v3\bin\yafaray-xml.exe

C:\Programs\yafaray_v3\bin\yafaray-xml.exe

TODO ?

link to vray pdf and optdetectors pdf
even though vray optional?

Chapter 40 Unofficial Update Additions

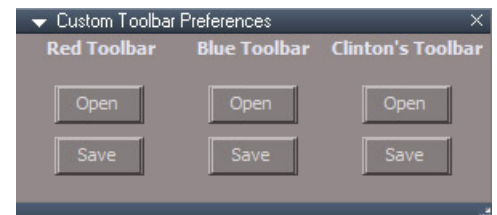


Open - opens the corresponding toolbar in a new link editor window and resets all the toolbars and clears the recent files list.

 This can be a long process.

Save - will save all built in toolbars.

 Be sure to follow the sequence, Open, make changes and immedietly Save using the corresponding save button. If any other toolbar is altered it will be saved in that configuration permanently.



Red Toolbar



Cut - select an item to use with the Paste. Saves the selected object to a file and then deletes the original.



Copy - same as the copy button on the bottom toolbar



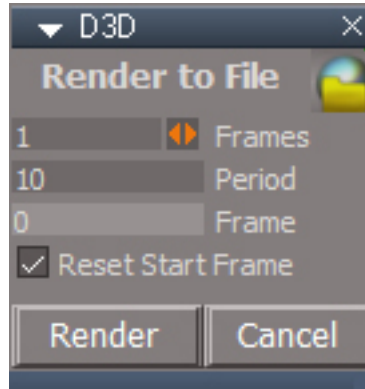
Paste - loads the file saved by the Cut into the active link editor window.



Render to File

LMB - Set Render to File
Set - Frames to Render
Render

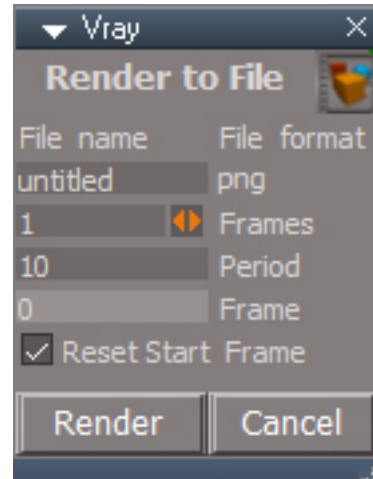
Uncheck - Reset Start Frame to render from the last Frame rendered
Note: Add addition Frames to Render from the last Frame rendered
Cancel- Stops the Activity and Closes the panel
Press your keyboard Esc key to Stop the Activity while rendering



Render Vray Animation

LMB - Set Render to File
Set - Frames to Render
Render

Uncheck - Reset Start Frame to render from the last Frame rendered
Note: Add addition Frames to Render from the last Frame rendered
Cancel- Stops the Activity and Closes the panel
Press your keyboard Esc key to Stop the Activity while rendering
Tip: Recommend that you set your render view's Ground to None



About: Snapshot & Vray Render to File

Allows you to render a sequence of images while Activities, Timers, and Scripts are running that do not interrupt this rendering process, like scripts that call Alerts, Dialogs, etc...

Caution: If you do not Set Render to File first before Render, you might end up with images created in the last Saved file from trueSpace's File Menu - File/Save, which is the most Recent File

It is only necessary to Set Render to File on the first run or when you change the place to Render -> Savein: [Folder]

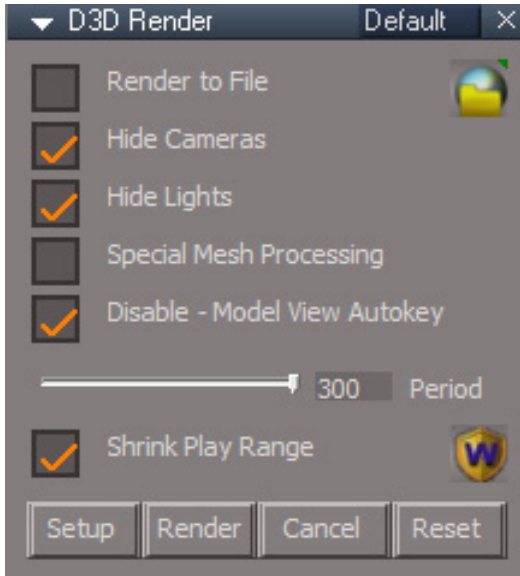


D3D Render



will erase undo history when button is pressed

Combines modelspace and workspace animations into one D3D workspace render sequence. Can also be used to bake workspace animations to modelspace animation via the autokey setting in modelspace and for rendering command script based animations.



Preview:

uncheck the Render to File
check Disable Model View Autokey
press the Render button

Render a sequence to files:

Check the Render to File
Press the Render To File button and
uncheck "Save animation from frame"
check "Save sequence starting with"
enter a starting frame number
set the file name
press the "Save settings" button and close the dialog
check Disable Model View Autokey
Press the Render button

General Usage:

Set the animation playback range in workspace

Press Render to File button to set the filename, location and frame numbering start

Press the Setup button

Disable modelspace autokey setting, unless specifically transferring workspace animations to modelspace

Press the Render button to begin the render.

Alternate manual process:

Do not press Setup

Open Protect Workspace and press the Backup button

Switch the main view to Model

Open a Workspace 3D Window

Set the Workspace Play Range

Note: The Play Range should be equal or greater than the Model's animation

Press the Render button

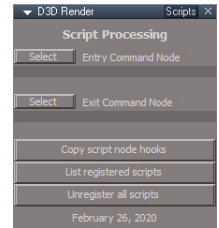


Render to File - pg 113, 7.1.7 Realtime Render To File



Protect Workspace - open panel and perform initial backup

[More Information](#)



Options:

Render to File - render an animation sequence to files

Hide Cameras - hide cameras during the render

Hide Lights - hide lights during the render

Special Mesh Processing - get NURBS, deformation and metaball shape animations from modelspace.

After rendering a dialog will give the option to close trueSpace to avoid problems when opening the python editor.

Disable Model View Autokey - prevent model space from baking keyframes

Period - delay used before restoring the protected workspace values

Shrink Play Range - will look at the range of keyframes set in workspace and adjust the play range to fit.

If the current play range is less than the keyframes, the play range will be expanded to fit.

Setup - open a docked model space view and the protect workspace panel and optionally fit the play range to the keyframes. If model space view is already open will be prompted to close the model view.

Render - start the render/preview

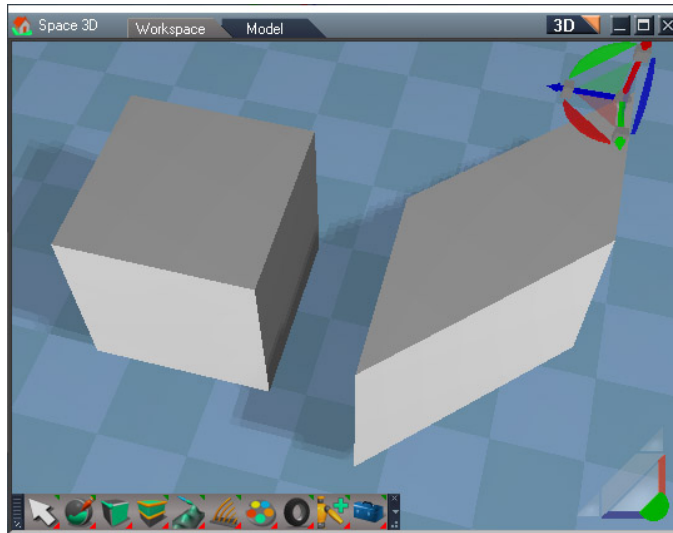
Cancel - stop the render/preview

Reset

Workspace Protection Notes: The Matrix option will interfere with modelspace transform animations. A keyframe can be used to protect workspace matrix values from modelspace changes. A keyframe can also be used to protect workspace light angle and camera fov values from modelspace changes.



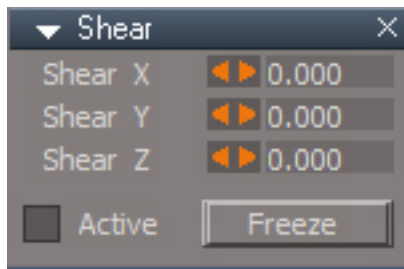
Changing layouts after a render may cause instability and crashes, first exit truespace



Right box has had a shear value of 1.0 applied in the X direction.



Shear - open the Shear panel



Select an object and open the panel.

The current shear values of the selected object will update the display.

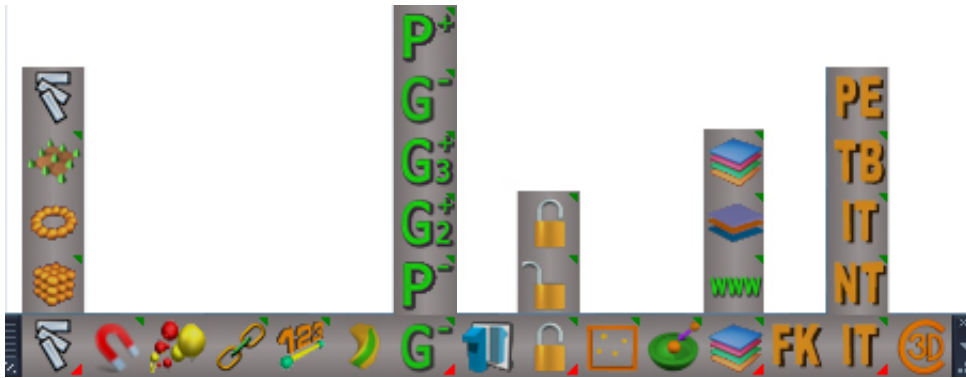
Drag the scrubbers to interactively change the shear value of the transform.

Press the **Freeze** button to bake the shear transformation into the mesh and flatten the axis..

The transform location, rotation and scale will be unchanged.

Active - when checked the shear values will update with selection changes

Gold Toolbar



Gold/Clintons Toolbar



Align



Point Clone



Radial Array



Grid Array



Snapping Toolbar



Particles



Constraints



Dimensions



Deformers



Parenting



Remove from Group



Add Group 3D



Add Group 2D



Un-Parenting



Mirror Matrix



Locking



Rectangle Select



Mesh Origin



Layers v3



Layers v4



Web Server



Character FK



Point Edit Toolbar



Toolbar Toolbar



Interpolation Toolbar



NURBS Toolbar



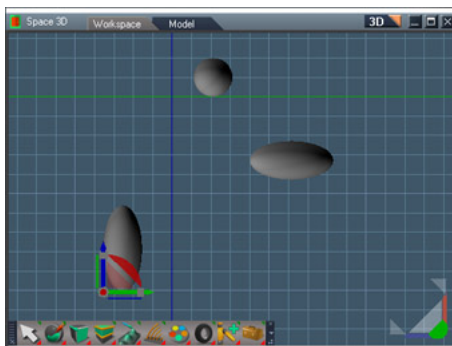
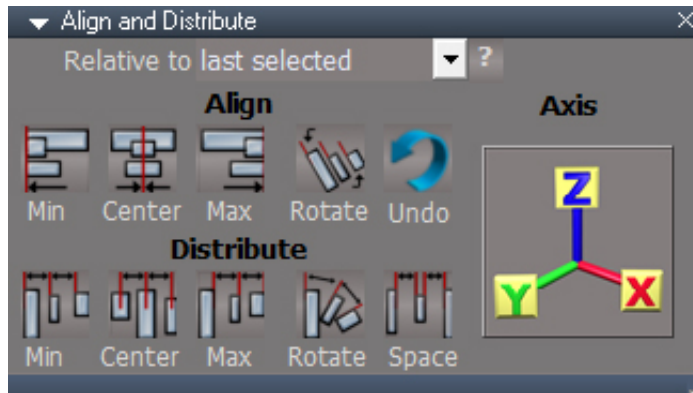
Restore Custom Scripts



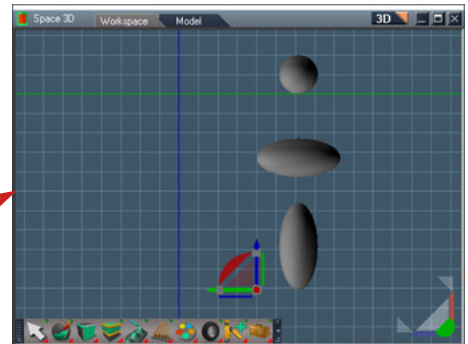
Restore Custom Scripts - if the scripts in this toolbar stop working, press to restore them to a working state.



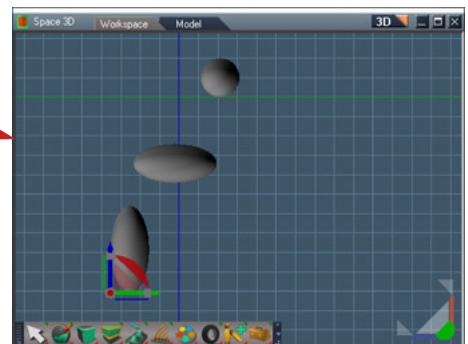
will erase undo history



before alignment and distribution



after alignment in X



after distribution in X,Y,Z



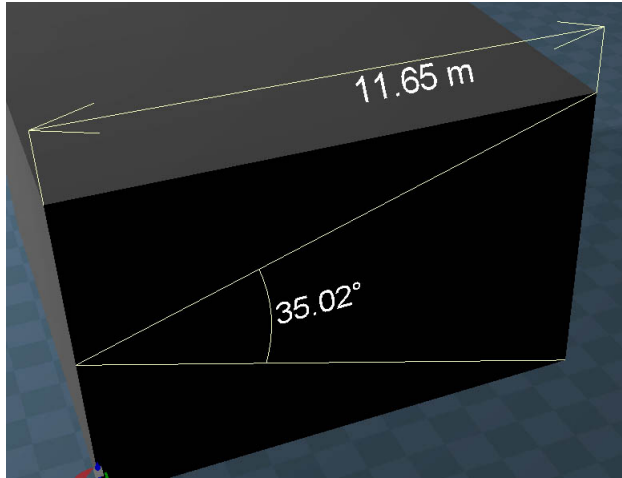
Align and Distribute selected objects in 3D space.



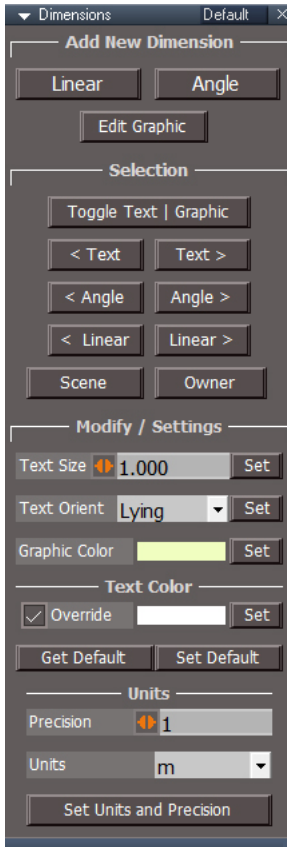
Does not work with encapsulated group objects



Dimensions - add linear and angle dimensions to the scene and to scene objects
RMB open the dimensions toolbar



The dimensions tool can be used to create measurement objects in the scene. They are assigned to the measured objects or to the scene when the measurement is between scene objects. These measurements are created between point selections. Select single points to dimension between points, select both points of an edge to use the middle of the edge, select all the points of a face to use the center of the face as the dimension point.



Usage:

Press the toolbar button to open the dimensions panel

Press Linear for a straight line measurement or press Angle for an angle measurement

For linear there will be 2 selections and 3 for angles.

For each selection:

LMB click to select a point

LMB drag to paint a selection

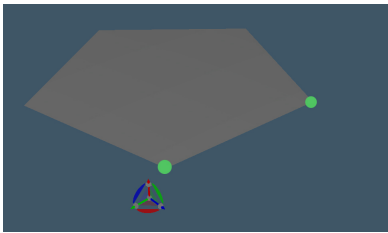
Ctrl+LMB to add to the selection

Shift+LMB to remove from the selection

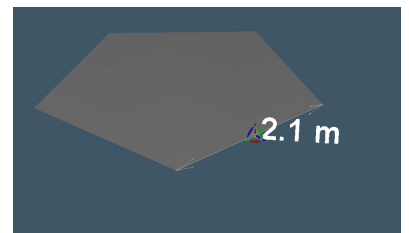
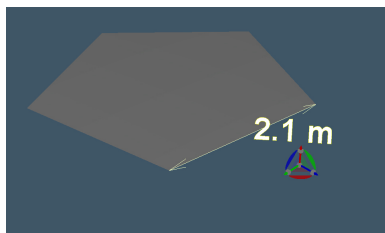
RMB click to confirm the selection and finish the tool or move on to the next selection.

After the dimension is created its text component will be selected for editing.

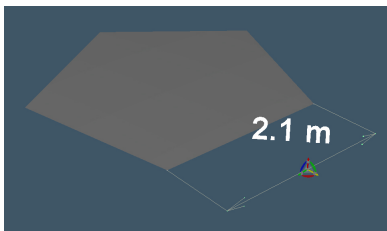
Edit Graphic is used to point edit the lines, arrow and arcs of the selected dimension. When pressed it will take the mesh into point edit mode and pre-select some vertices.



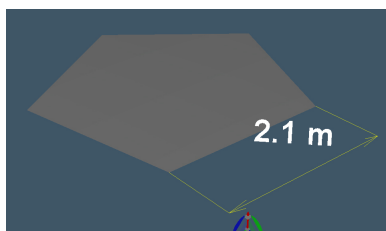
Click and click on each point to create the dimension

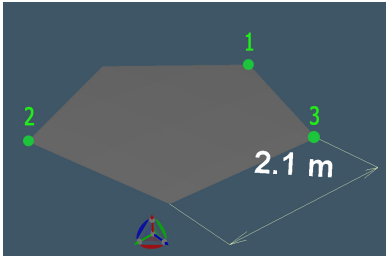


edit graphic and enters point edit mode all arrow points selected

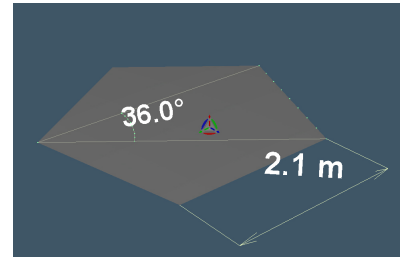
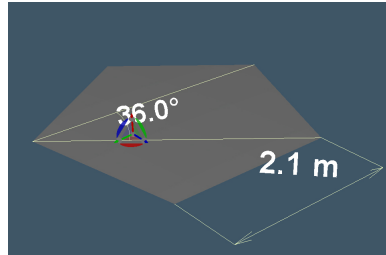


move selected points to reveal connecting lines

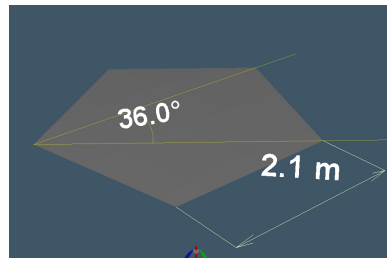
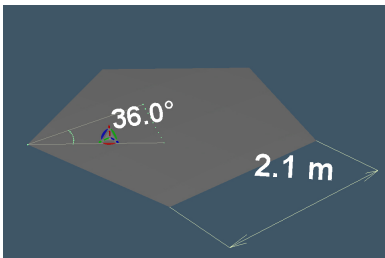




lclick and rclick on each point in order to create the angle



edit graphic and enters pe
mode all angle points selected



ctrl+rmb on scale cube to size from the corner, can also just select the
arc points to move the arc in and out

Add New Dimension

Linear - select the start and end for a linear dimension. A scene dimension is created if the select points are not all on the same object

Angle - select the first arm end, the center corner of the angle and the second arm end to create an angle dimension. A scene dimension is created if the select points are not all on the same object

Edit Graphic - edit the mesh for the selected dimension. Linear type will select all the points needed to create an offset for the dimension. Angle type will select all the vertices so they can be scaled from the origin, shortening or lengthening the arms.

The text of the dimension will be selected after creation so it's alignment can be adjusted. Object coordinate system may be better for any text transforms.

Selection

Toggle Text / Graphic toggle selection between the mesh and text object for a dimension

< Text --- Text > - select previous or next dimension text object

< Angle --- Angle > - select previous or next dimension angle object

< Linear --- Linear > - select previous or next dimension linear object

Scene - select the scene

Owner - select the object the dimension belongs to

Modify / Settings

Set - buttons to modify the selected dimension object

Text Size - size of dimension text.

Text Orient - set the 3D text to Lying or Standing

Graphic Color - color for non-text dimension objects

Override - use this color input for the text, otherwise use the color defined in the internal text template.

Get Default - copy the text template color into the override color

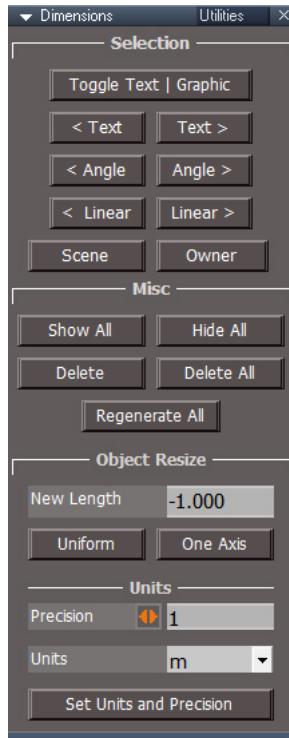
Set Default - copy the override color into the text template

Precision - number of decimal places

Units - m, cm, mm, ft, ft-inches

Set Units and Precision - modify the selected dimension object

Utilities



Show All - show all hidden dimensions for the selected object

Hide All - hide all dimensions for the selected object

Delete - remove the selected dimension

Delete All - remove all dimensions for the selected object

Regenerate All - remove all dimensions and recreate them from the stored dimensions data object. Used to fix dimensions when an object is scaled or transformed in some way or to replace the style of the objects dimensions.

New Length - replacement value for the selected linear dimension for object

Uniform - scale object to match the New Length

One Axis - if the dimension is along an objects axis direction, scale non-uniformly to match the New Length

Precision - number of decimal places

Units - m, cm, mm, ft, ft-inches

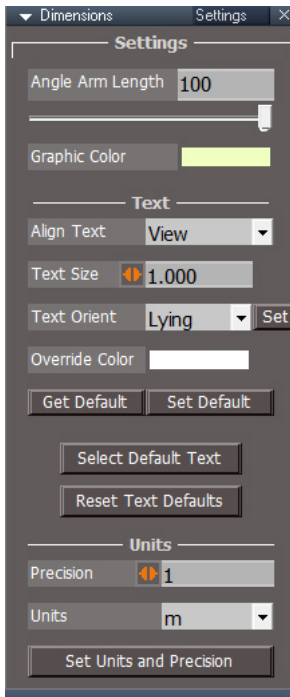
Set Units and Precision - modify the selected dimension object

Any manual modification to text alignment and graphic point edits will need to be repeated after a Regenerate All run.

Object Resize is not for scene dimensions between objects.

Object Resize will set all dimensions of the object to the same units.

Settings



Angle Arm Length - create angle arms to 100% or less of selected points length

Graphic Color

Align Text - create dimension text aligned to one of three options

None - aligned with the world x axis facing up in the z axis

Dimension - rotated to follow the direction of the graphic

View - default, rotated to face the viewer

Text Size - size of dimension text.

Text Orient -

Override Color - use this color input for the text, otherwise use the color defined in the internal text template.

Get Default - copy the text template color into the override color

Set Default - copy the override color into the text template

Select Default Text - select the text template for editing default settings

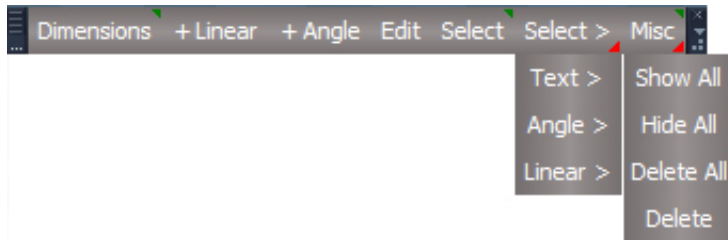
Reset Text Defaults - reset parameters for the text template object

Precision - number of decimal places

Units - m, cm, mm, ft, ft-inches

Set Units and Precision - modify the selected dimension object

Dimensions Toolbar



Dimensions - open the dimensions panel default aspect, rmb switch to utilities panel after the panel is already open, subsequent lmb will not switch to the default aspect

+Linear - add a linear dimension

+ Angle - add an angle dimension

Edit - point edit the selected dimensions graphic component

Select - toggle selection between the dimension text and graphic components, rmb select the object the dimension is assigned to

Select > open select next subtoolbar section

Text > - select next text component

Angle > - select the next angle graphic component

Linear > - select the next linear graphic component

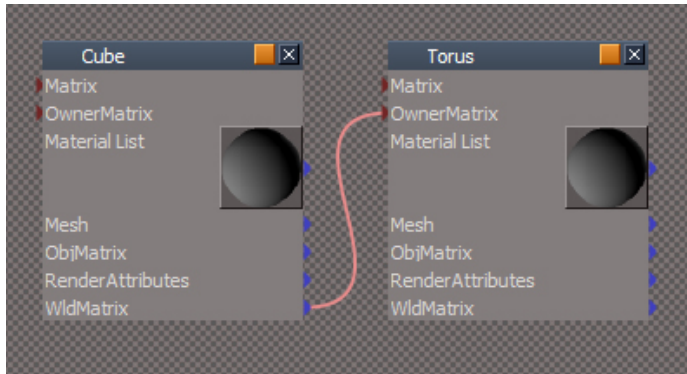
Misc open the misc subtoolbar section, rmb select the scene

Show All - show all dimensions for the selected object, rmb select dimension owner

Hide All - hide all dimension for the selected object, select dimension owner

Delete All - remove all dimensionions for the selected object, select dimension owner

Delete - remove the selected dimension



A parent child relationship is created when the WldMatrix of one object, the parent, is connected to the OwnerMatrix of another object, the child. When connected in this way the child will inherit the parent objects rotation, location and scale the same way a 3D group member inherits rotation, location and scale from the group.



Parenting - creates a parent child relationship between objects.

Select the child objects then add the parent object to the selection and press the button. Parenting structures do not export to non-trueSpace formats like Collada(dae) and X.



Un-Parenting - remove a parent child relationship

Select the child objects to be unparented and press the button



Add Group 3D - add to an existing 3D group as a 3D member

Select scene objects then add a 3D group object to the selection and press the button. The objects will be added to the group with 3D encapsulation.



Add Group 2D - add to an existing 2D or 3D group as a 2D member

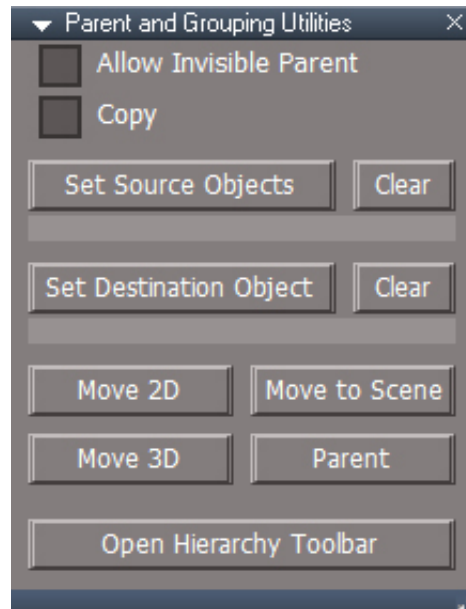
Select scene objects then add a group object to the selection and press the button. The objects will be added to the group with 2D encapsulation.



Remove from Group - remove from an existing 2D or 3D group

Select scene objects which reside inside a 2D or 3D group and press the button. The objects will be removed from the group and placed at the scene level.

RMB to open the open the Parent and Grouping Utilities panel



Allow Invisible Parent - normal parenting occurs between 2 objects that share an encapsulation, like the scene. This option enables the ability to parent objects at different encapsulation levels. The connection does not show in the link editor, it is invisible.

Copy - when enabled objects will be copied instead of moved into and out of groups.

Set Source Objects - preselect the selected objects as the children for parenting or subobjects for grouping functions below.

Set Destination Object - preselect the selected object as the parent for parenting or encapsulation for grouping functions below.

Clear - clear the preselection for source and destination.

Move 2D - same as **Add Group 2D**, except it will use the source objects if they are defined above and will use the destination object if it is defined above. pow.

Move to Scene - same as Move2D except the destination is always the scene. Will not work with objects outside of the 3D view. ⓘ

Move 3D - same as **Add Group 3D**, except it will use the source objects if they are defined above and will use the destination object if it is defined above. pow.

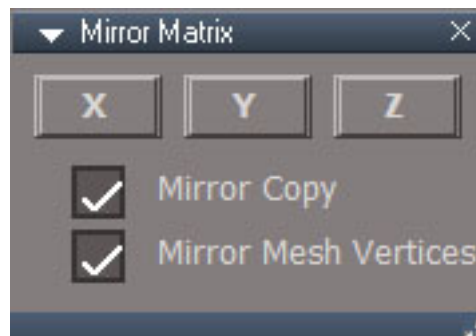
Parent - same as **Parenting**, except it will use the source objects if they are defined above and will use the destination object if it is defined above. pow.

Open Hierarchy Toolbar - open floating toolbar with all functions readily available.



Mirror Matrix - opens the mirror matrix panel

The Mirror Matrix tool effects the object matrix values. It is similar to the built in modeling mirror tool but mirrors the matrix values as well as the vertices of the mesh. This tool is also compatible with cameras and lights and NURBS objects.



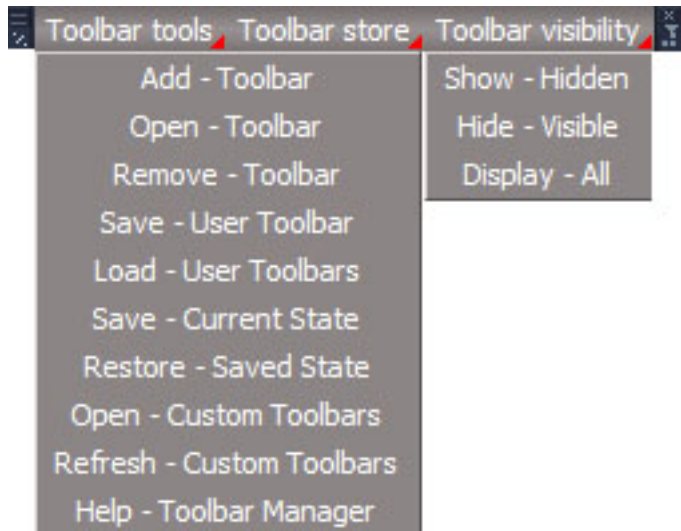
Set the options as desired, select a scene object then press one of the X, Y or Z buttons.

Mirror Copy - make a copy and mirror it

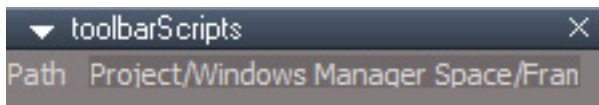
Mirror Mesh Vertices - a mesh requires that the vertices are updated for a full mirror effect. Can be disabled to only mirror the matrix values. This option is ignored for cameras and lights.



Toolbar



For more information use the **Help - Toolbar Manager** menu option



RMB panel shows the last toolbar/window that was opened using the **Open - Toolbar** menu option

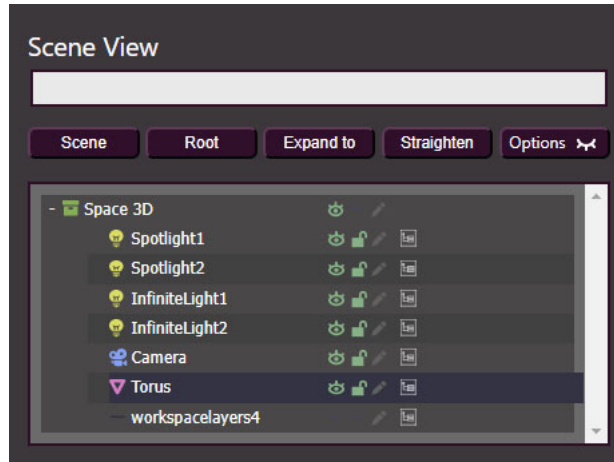
Keyframe Interpolation



Interpolation Toolbar



Scene View 2 Scene View 2 is an updated version of the Scene View.



Action Buttons

- Scene - refresh/load with the scene as the top level node
- Root - refresh/load with the Kernel root as the top level node
- Expand to - open the tree to the currently selected node
- Straighten - when the display columns get out of alignment
realign them
- Options - display options for the tree view

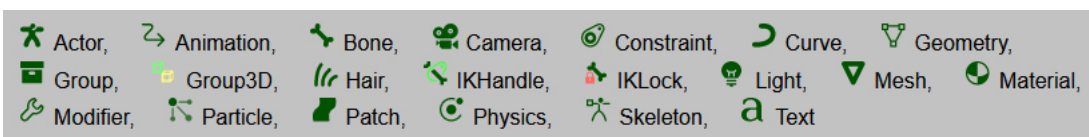


Rows

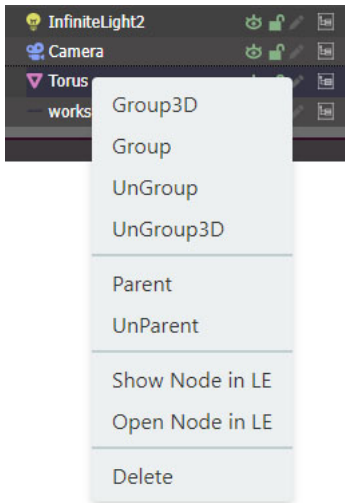
- Icon indicating the type of object - see below
- Object name - click to select, double click to rename
- Visible/Hidden indicator - click to show or hide the object,
if you get unexpected results ctrl+click to run in intensive mode
- Locked/Unlocked indicator - click to lock or unlock from 3D viewport selection
- Notes - add or edit an existing note for the object. Gray = no note, Green = has
note, Yellow = note previewed at the top.

- ctrl + lclick to toggle
selection of items
- shift + lclick select a
range from the previous
selected node to last
selected node

Load subobject - load children and expand the tree for this row



 Scene View 2 does not work in Windows XP.



Group3D/Group/Ungroup - all correspond to encapsulation controls in truespace

Ungroup3D - same as Ungroup but will cleanup connections and remove the transform node , UU required

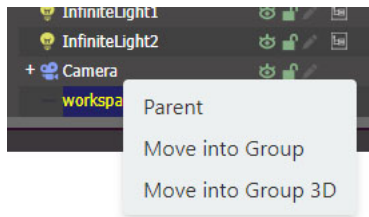
Parent - ctrl click to choose the children and parent nodes, right clicked the node that will be the parent

UnParent - select the child node(s) and remove them from the parent

Show Node in LE - centers the node in the LE view

Open Node in LE - open and look inside the node in the LE view

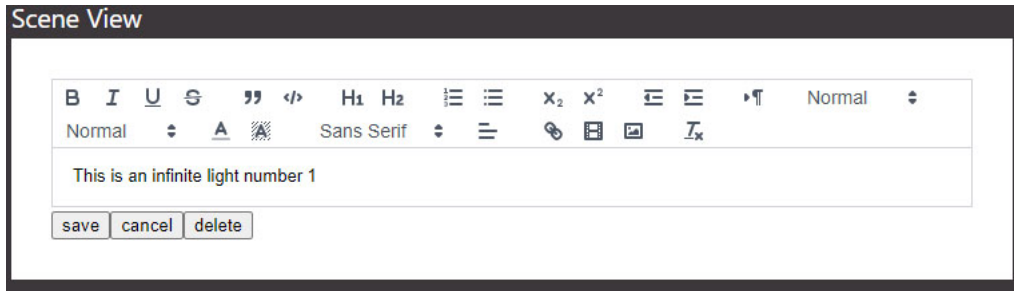
Delete - remove the node(s) from the scene, if node is a parent node it will also remove the children



Parent - drag selected nodes onto the new parent node

Move into Group - drag selected nodes onto another node to move them into it

Move into Group 3D - move into group for 3D objects with matrix connections



click the notes icon to open the note editor and create or edit a note

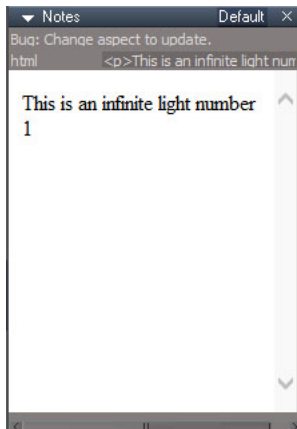
save - save the note

cancel - cancel any changes and exit the note editor

delete - remove the note

save, cancel, delete

if the selected object has a note, the notes will display at the top.



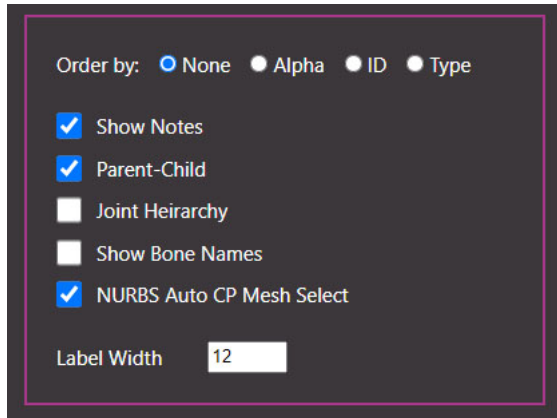
When an object is selected it's note will display in the trueSpace panel view

Not all of the formatting will translate to the tS panel display.

The panel can be ctrl-dragged out of the panel and it has options for various sizes

- Default
- Wide
- ExtraWide
- WideTall
- ExtraWideTall

The Scene View does not need to be open to see the note. A simplified version of note can be viewed inside tS without the page open



Order by: - arrange alphabetically, by trueSpace node ID or by type of object. It is

Show Notes - uncheck to hide the notes section at the top. The notes editor will still open as needed.

Parent-Child - display parent child relationships

Joint Heirarchy(Hierarchy) - display actor skeleton structures instead of group structure, bones will not be visible

Show Bone Names - the name of the child bone of the joint will show at the end of the row when Joint Hierarchy is active.

NURBS Auto CP Mesh Select - when selecting a NURBS object it's control point mesh will be selected instead so it can be edited or transformed in the 3D viewport.

Label Width - increase the value to prevent long object names from taking more than 1 line