

Chapter 2: User Interface	0
2.0 New Scene and Context	2
2.4 Toolbars	2
2.4.5 Preset Shortcuts	3
2.5.1 Using Widgets	7
2.6 Stack View	8
2.7 3D View – Workspace	9
2.7.1 Object Navigation Tools	9
2.7.2 View Navigation Tools	10
2.7.4 Render Peferences	12
2.7.6 Desktop Preferences	17
2.7.6a Undo/Redo	21
2.7.7 Perspective and Orthogonal Views	22
2.7.9 Workspace File and Help Menu	23
2.8 2D View – Link Editor	86
2.8.1 Link Editor Description	86
2.8.5 Encapsulating Objects	103
2.12 Other Views	157
2.13 Macro Recording and 3D Recording	163



Stack Toolbar New Scene and Context Unofficial Update



Bottom Toolbar New Scene and Context



New Scene

This removes all objects from your Workspace and starts you off with a fresh scene. It will first prompt you to save your work by pressing no and saving it to a library or to continue and clear the scene.

RMB open link editor to the scene



Reset to Default Context

Opens a dialog to confirm the reset to default context

todo better writeup

RMB old behavior resets to default context without any warning or dialog choice.



Save current state same as file menu save using the ctx extension

2.4.5 Preset Shortcuts

trueSpace comes with a set of predefined shortcuts for Workspace, Link Editor, and some that work in every view. The following table shows the list of these predefined shortcuts.

Global Shortcuts

Key	Description
CTRL F1	3D window
CTRL F2	Link Editor
CTRL F3	Command Prompt
CTRL F4	Command History
CTRL F5	Output Console
CTRL F6	Status View
CTRL F7	Animation View
CTRL F8	Package Manager
CTRL F9	Scene View
CTRL F11	Library Browser
CTRL F12	Shared Space
SHIFT CTRL R	Reset to Default Context
SHIFT CTRL N	Generate New Space
LEFT	Select Previous object
RIGHT	Select Next object
DOWN	Select first Child object
UP	Select Parent object
SHIFT CTRL LEFT	Select Previous object & Look At
SHIFT CTRL RIGHT	Select Next object & Look At

Global Shortcuts

Key	Description
Z	Object Move tool
X	Object Rotate tool
C	Object Scale tool
A	Camera Move tool
S	Camera Rotate tool
D	Camera FOV tool
SHIFT X	X lock - On/Off
SHIFT Y	Y lock - On/Off
SHIFT Z	Z lock - On/Off
F1	World Coordinates
F2	Object Coordinates
F3	Screen Coordinates
F4	Tangent Coordinates
F5	X lock - On/Off
F6	Y lock - On/Off
F7	Z lock - On/Off
F8	Reset View

3D Window Shortcuts

Key	Description
DELETE	Delete selected object
CTRL K	Delete selected object
CTRL I	Inspect Material
CTRL R	Render to file
CTRL ~	Set the selected camera as active
CTRL 1	Switch to Perspective Eye view
CTRL 2	Switch to Top orthogonal view
CTRL 3	Switch to Bottom orthogonal view
CTRL 4	Switch to Front orthogonal view
CTRL 5	Switch to Back orthogonal view
CTRL 6	Switch to Left orthogonal view
CTRL 7	Switch to Right orthogonal view
CTRL 8	Switch Nearest Orthogonal view
CTRL 9	Switch to Isometric view
CTRL 0	Reset View
CTRL Z	Undo
CTRL SHIFT Z	Redo
CTRL C	Copy object
4	Object Move Left -X
6	Object Move Right +X
8	Object Move Forward -Y
2	Object Move Reverse +Y
Page Up	Object Move UP +Z
Page Down	Object Move Down -Z
HOME	Object Normalize Location

3D Window Shortcuts

Key	Description
7	Object Rotate Left +Z
9	Object Rotate Right -Z
1	Object Rotate Forward -X
3	Object Rotate Reverse +X
0	Object Rotate Left +Y
.	Object Rotate Right -Y
CTRL 7	Object Rotate Left +Z +45
CTRL 9	Object Rotate Right -Z -45
CTRL 1	Object Rotate Forward -X -45
CTRL 3	Object Rotate Forward +X +45
CTRL 0	Object Rotate Left + Y
CTRL .	Object Rotate Right -Y
END	Object Normalize Rotation
SHIFT LEFT	Previous Key frame
SHIFT RIGHT	Next Key frame
CTRL LEFT	Previous Frame
CTRL RIGHT	Next Frame
SHIFT HOME	Start Frame
SHIFT END	End Frame
CTRL HOME	Play
CTRL END	Pause
ESC	Pause
TAB	Object Navigation Widget - On/Off
SHIFT + L	Workspace Layers

Point Edit Shortcuts

Key	Description
ESC	Object tool/Unselect
DELETE	Delete selected Elements
SHIFT DELETE	Collapse Loop
CTRL K	Delete
CTRL C	Copy selection
CTRL F	Form Face
TAB	Point Edit Widget On/Off
V	Select Vertices
F	Select Faces
E	Select Edges
L	Select Face Loops
T	Select Context
SHIFT I	Invert Selection
SHIFT A	Select Connected
SHIFT C	Convert Selection
SHIFT S	Smooth Selection
SHIFT O	Outline Selection
Q	Quad Divide Selection
SHIFT Q	Smooth Quad Divide
CTRL Q	Quadrify Selected polygons
M	Mirror Selection
CTRL M	Mirror Modeler
SHIFT B	Form Polygonal Bridge
/	Split polygons
SHIFT /	Merge polygons
H	Hide Selected geometry
SHIFT H	Hide Unselected geometry
U	Show All hidden geometry

Point Edit Shortcuts

Key	Description
ADD	Add SDS
SUBTRACT	Remove SDS
CTRL D	Dynamic Sweep
CTRL S	Sweep selected Face
CTRL B	Bevel tool
CTRL T	Tip selected Face
CTRL P	Add Polygons
CTRL E	Add Edges
CTRL V	Add Vertices
CTRL L	Add Loop
CTRL W	Weld geometry together
CTRL H	Heal Vertices
CTRL O	Optimize Triangulation
SPACEBAR	Open Quad toolbars
~	Default selection settings
1	Select by Painting
2	Select by Rectangle
3	Select by Lasso
4	Select by Move
5	Soft Selection
6	Select by Material
7	Select Edge Loops
8	Select Face Loops
9	Select Visible Geometry
0	Select All Geometry
-	Shrink selection
+	Grow selection

Animation Editor

Key	Description
DELETE	Delete object
CTRL C	Copy object
CTRL X	Cut object
CTRL V	Paste object
CTRL A	Select All
CTRL Z	Undo
CTRL SHIFT Z	Redo
SHIFT LEFT	Previous Key frame
SHIFT RIGHT	Next Key frame
K	Set Key frame
CTRL LEFT	Previous Frame
CTRL RIGHT	Next Frame
SHIFT HOME	Start Frame
SHIFT END	End Frame
CTRL HOME	Play
CTRL END	Pause
ESC	Stop & Start Frame

UV Editor

Key	Description
CTRL Z	Undo
CTRL SHIFT Z	REDO

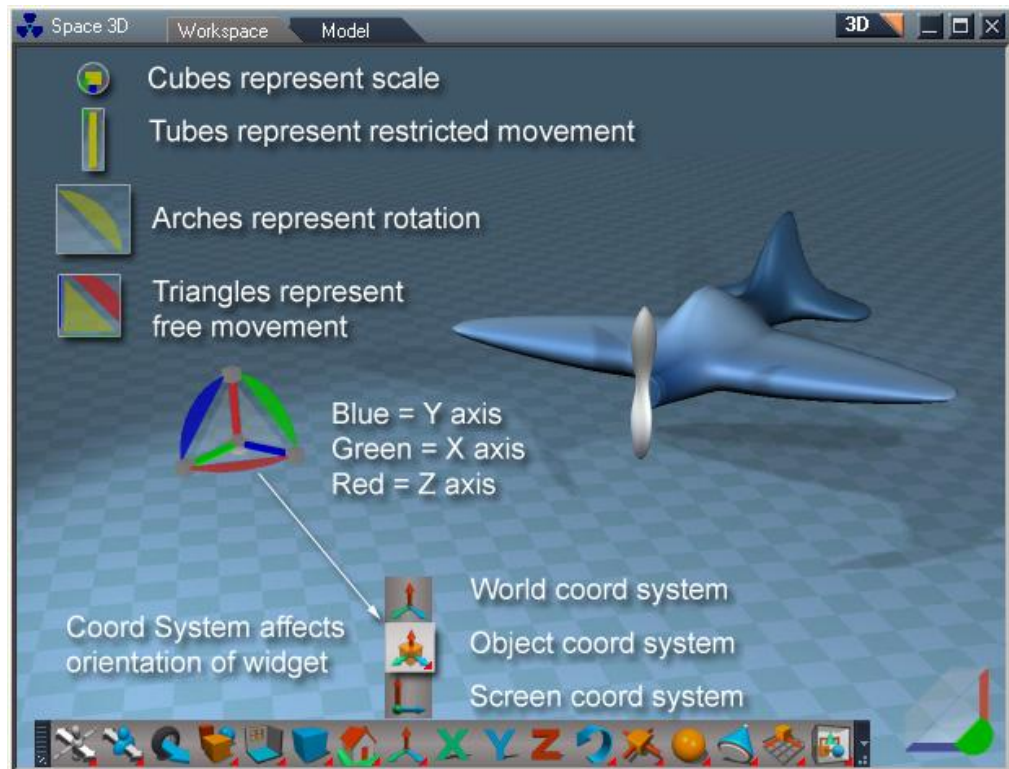
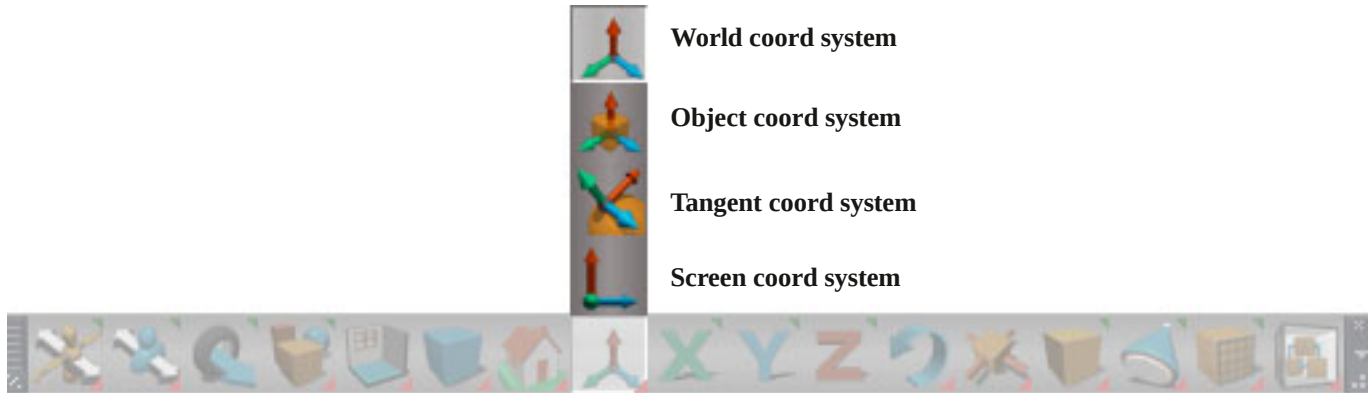
Info panel

Key	Description
CTRL Z	Undo
CTRL SHIFT Z	REDO

Link Editor

Key	Description
DELETE	Delete selected node
CTRL	Undo
CTRL SHIFT Z	Redo
CTRL Drag	Copy selected object
LEFT	Select Previous object
RIGHT	Select Next object
DOWN	Select first Child
UP	Select Parent
CTRL SHIFT LEFT	Select Previous & Center
CTRL SHIFT RIGHT	Select Next & Center
HOME	Current scene in Link Editor
NUM KEYS	
9	Maximize & Arrange All
3	Minimize & Arrange All
5	Center All
1	Zoom All
*	Iconize All
-	Minimize All
+	Maximize All
/	Arrange All
Mouse buttons	
RMB	Zoom ALL/Move to Top Left
RMB + Drag	Zoom In/Out
MMB	Center selection
MMB + Drag	Move
CTRL + MMB	Up one level
MMW	Scroll Up and Down

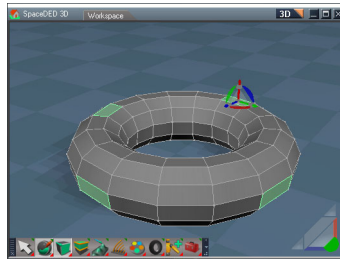
2.5.1 Using Widgets



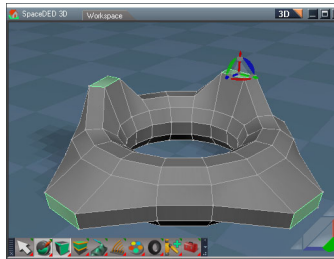


Tangent coordinate system is useful for point edit modeling. The object navigation widget in tangent mode behaves the same as in world coord mode.

The tangent Coordinate system is not documented in the original manual.



Before move



After move

When 2 or more unconnected elements are selected the widget will be centered on one of the elements and each of the elements will move as if they each have an individual widget with the z handle aligned with the normal direction of the element and that moves with the visible widget. The elements will each move, rotate and scale individually instead of from a shared central location.

When 2 or more meshes are in point edit mode together and the selection has elements from two or more of the meshes, the rotation and scale will be centered on the widget and the elements do not move as individuals.

When a single edge or point is selected the tangent coordinate behaves the same as the object coord system. When a single face is selected it behaves almost identically to the object coord. At some angles the widget will be slightly rotated on the z axis.

If 2 adjacent elements are selected the tangent widget is the same as object widget. This includes two points joined by an invisible triangle edge.

The object navigation widget will line up with the first selected object when in object coord mode.

2.6 Info Panel

math expressions can be used in the numeric input fields:

+, -, *, /, sin, cos, arcsin, arcos, ln, log, exp, sqrt, PI

2.7 3D View – Workspace

2.7.1 Object Navigation Tools



Object Move RMB to exit tool.



Object Rotate RMB to exit tool.



Object Scale RMB to exit tool.



Object Look At



Object UnLook At

To use UnLook At, select the object that is to be freed then click the button to remove the Look At constraint.

2.7.2 View Navigation Tools



Unofficial Update Bottom Toolbar



Unofficial Update Stack Toolbar



First Person Navigation

Camera Move

Camera Rotate

Camera FOV

Rectangle Zoom



Look At Selection



Reset View



Camera Move RMB to exit tool



Camera Rotate RMB to exit tool



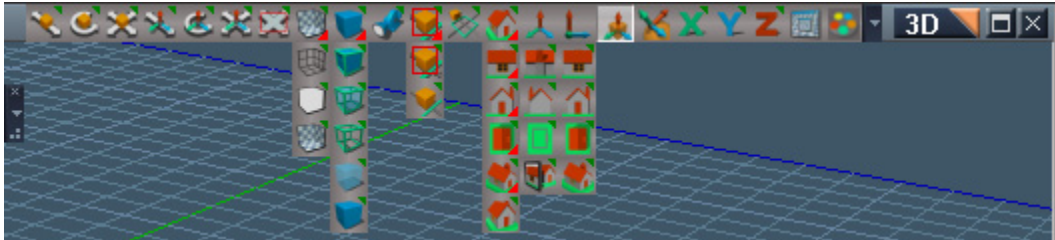
Camera FOV RMB to exit tool



Look At Selection RMB select and look at next object.



Zoom To Selection Left-Click = Zoom to Selection / Right Click = Zoom to next object



Unofficial Update 3D Mini Toolbar



Perspective View



Isometric

Perspective and Isometric include a RMB action to rotate the view in 90 degree increments.



Open New 3D View



Open Material Editor



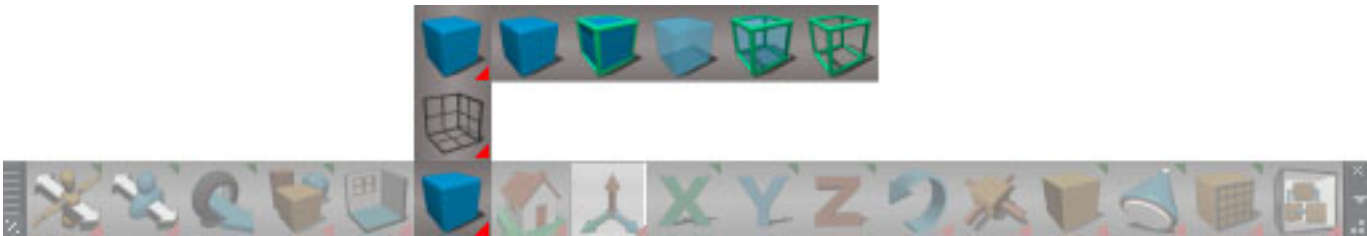
Set Camera RMB switch to perspective view.



Zoom To Selection RMB reset view.

2.7.4 Render Preferences Presets

With this icon group you can set the real-time render modes.



Render Preferences Presets



Unofficial Update Render Preferences Presets

All the buttons in the render preferences and ground display preferences change the active 3D window.

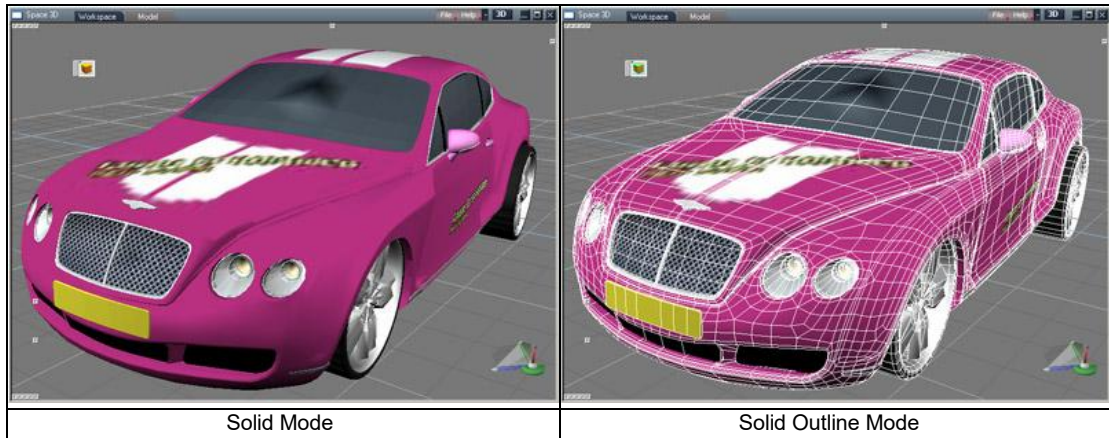
RMB will change all 3D windows.

Draw as Solid

trueSpace will render all objects in your scene as completely opaque, shaded, and preview rendered.

Draw as Solid Outline

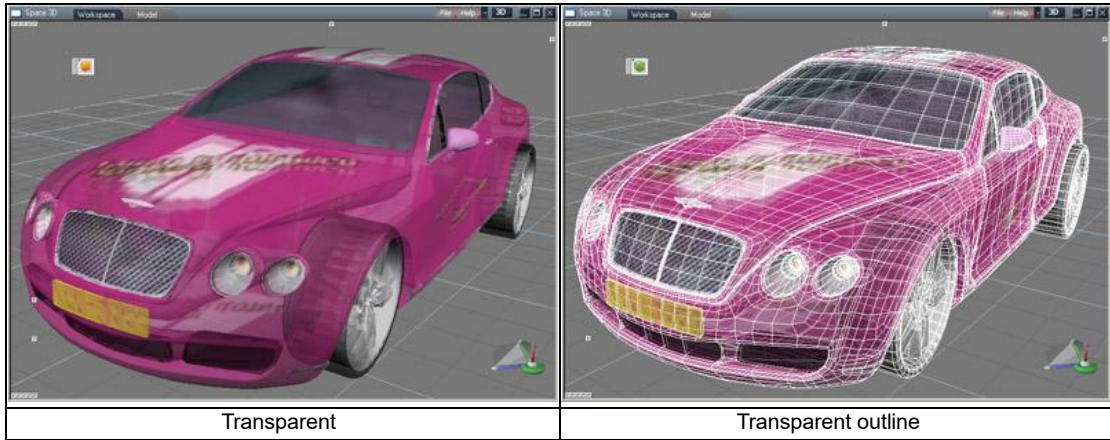
trueSpace will render the objects just as in solid mode and also outline the edges and vertices of the objects.

**Draw as Transparent**

This will allow you to partially see through objects.

Draw Transparent Outline

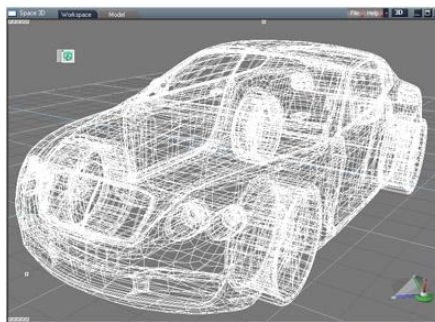
This is similar to Draw as Transparent , with the added function of highlighting all vertices and edges.



Draw as Wireframe



This will not give you a preview render of what your object will look like in the final render, but it will speed up navigation in the interface because there is less information on screen for the video card to update.



Wireframe



Ground Display Mode



Unofficial Update Ground Display Mode



Ground Solid



Ground None



Ground Wire

The Render Preferences Ground settings also has a **TwoSided** ground which is the same as solid but with a visible bottom surface.

All the buttons in the render preferences and ground display preferences change the active 3D window.
RMB will change all 3D windows.



Show and Hide



Show Selected



Hide Selected



Show Cameras and Lights show all cameras and lights



Hide Cameras and Lights hide all cameras and lights



Show All

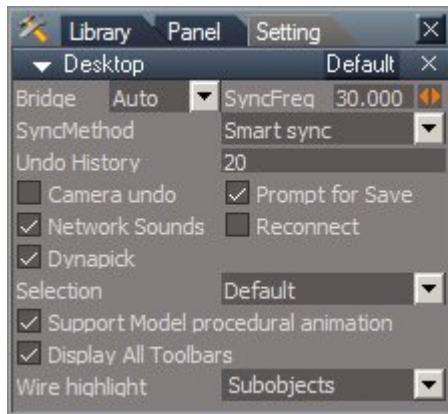


Hide All

RClick on the buttons opens the object render attributes panel for the first selected object.

To isolate the selected objects Hide All then Show Selected

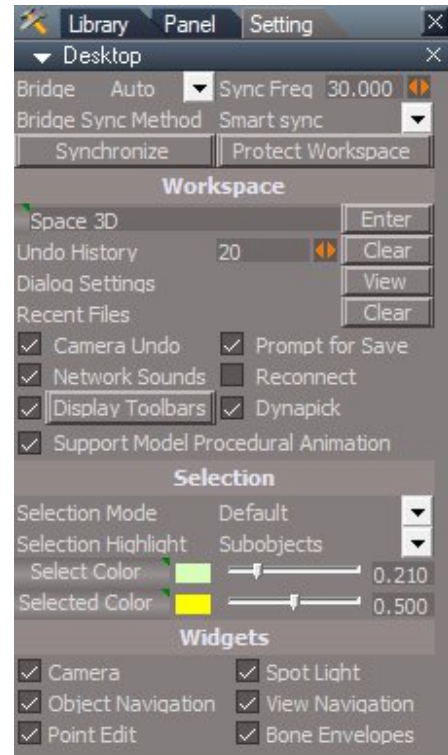
2.7.6 Desktop Preferences



Desktop Default



Colors Aspect.



Unofficial Desktop Combined Default

Synchronize loads the Synchronize script into the scene and opens the panel.

Protect Workspace open the Protect Workspace panel

Scene naming - small button LMB copies the scene name into the text input field, RMB sets the text input field to "Space 3D",

Enter button renames the scene based on the text input field.

Clear – clear undo history

View open the dialog settings panel

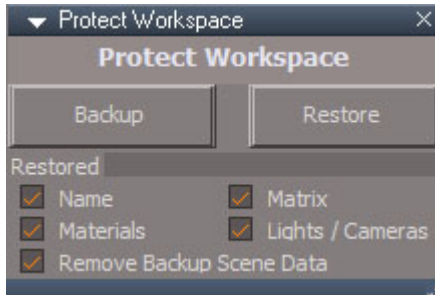
Clear – clear recent files list

Display Toolbars button and checkbox – uncheck to only show the 3D toolbars in the active 3D window. Press the button to restore normal behavior.

Picking Select and Selected Color reset buttons – RMB to reset, LMB no effect

Picking Select: Double click to Set the selected object wire color.

Selected: Double click to Set selected object wire color.



The Protect Workspace script saves and restores workspace attributes to protect them against modelspace changes. It protects materials, object names, matrix transforms, camera fov and spotlight angle.

Backup - save data and materials nodes to temporary stores in the scene

Restore - restore the data and material nodes

Protection Options

Name - stop renaming of nodes

Materials - stop conversion of workspace materials to lightworks materials

Matrix - stop transformation value changes

Lights/Camera - stop changes in spotlight angle and camera fov

Remove Backup Scene Data - optionally delete backup data when the restore is run

Usage:

Push the Backup button to backup the nodes and values

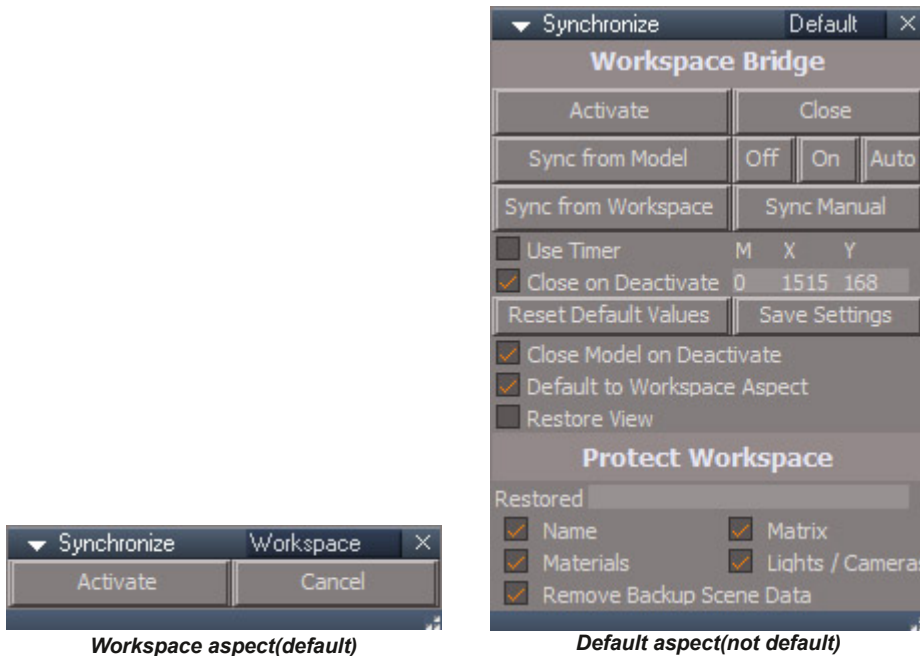
Open modelspace and do modelspace work

Close the modelspace window

Push the Restore button to retrieve the previous workspace state



Protecting materials will destroy modelspace standalone deformations



Changes in the workspace view are not reflected in the modelspace view. You can move an object in modelspace and the same object will follow in workspace, but if you move the same object in workspace, modelspace will not follow. The Synchronize script makes modelspace follow the workspace changes. With synchronize active it is possible to render a workspace animation from inside modelspace and to combine workspace and modelspace animations into one render.

 *When the Deactivate is run undo history will be erased.*

 Rendering with synchronization in a floating model view may destabilize trueSpace. It is recommended to render with the main docked 3D view as the model view.

Workspace aspect

Activate will link workspace changes to modelspace. If a Model view is not open, Activate will open a new Model view. A 3D workspace view must be open before activating the synchronization.

Deactivate or **Cancel** will stop the synchronization, close the modelspace view and close the synchronize panel.

Workspace is the true default mode and runs in 100% automatic mode. Pressing any button in the Workspace Aspect will change the run time values to Workspace aspect default values. If you make changes in the Default aspect do not press any buttons in the Workspace aspect or you will lose your changes.

Default aspect

To set the Default aspect as the default behavior mode takes the following steps:

- 1.Switch to the Default aspect
- 2.Uncheck Default to Workspace
- 3.Press the Save Settings button to make the change permanent

To make workspace the default check Default to Workspace and press Save Settings to make permanent.

Activate will open a new 3D view or use an existing 3D view, convert it to a modelspace view and modelspace will become aware of workspace changes.

Deactivate will stop the synchronization, close the modelspace view and close the synchronize panel.

Close will close the synchronize panel.

Sync 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".

Sync 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".

Off, On, Auto sets bridge switch value using buttons instead of the desktop panel dropdown .

Sync Manual is the same as setting the bridge switch value to Off and then Auto .

Use Timer is for synchronizing workspace physics and procedural animations.

Close on Deactivate when checked will close the panel after the Deactivate button is pressed. The tool can be run more than once if this option is turned off.

Reset Default Values sets all controls to the Workspace aspect(default) automatic run values. It also resets it's internal camera parameters. ⓘ *This will clear the undo history.*

Save Settings saves the settings used in the default aspect.

Close Model on Deactivate when checked will close the modelspace view after the Deactivate button is pressed. The tool will not close an open modelspace view if this option is turned off.

Default to Workspace Aspect when checked will make the workspace panel the default.

Restore View when checked will restore the workspace 3D view to the state it had before synchronization.

Workspace copy, erase, undo and redo are missing from the workspace portion of the original manual.



2.7.6a Copy and Erase



Copy LMB creates a copy of the selected object(s) and arrange the new nodes in the link editor.
RMB old behavior of only copy the first selected item

① *LMB will clear the undo history.*



Erase LMB will erase the currently selected object(s) and compensates for NURBS objects. It also formally deselects to fix a ghost selection bug (tS thinks the objects still exist).
RMB old behavior, no compensation for NURBS objects or ghost selection fix

2.7.6b Undo and Redo



Undo



Redo

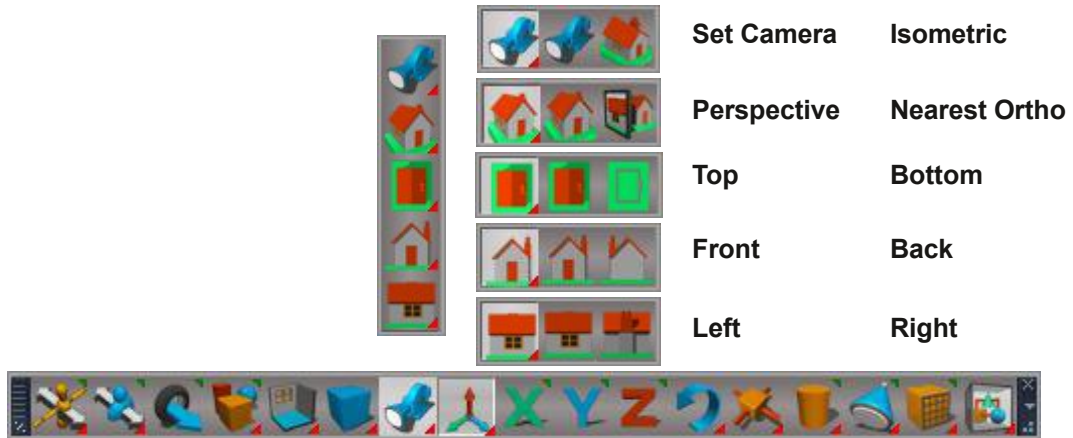
The Undo tool (CTRL+Z keyboard shortcut) reverses the last operation performed on an object. This makes it easy to try things out in trueSpace and quickly undo something that did not work out the way you planned.

If you Undo something and then change your mind, you can use the Redo icon.

Each of these tools can store multiple levels of actions. If you wish to undo the last 4 actions you performed on your object, selecting Undo 4 times will bring you back to where you were prior to those actions. If you wish to redo the changes you just made, 4 clicks on the Redo icon will restore all the changes.

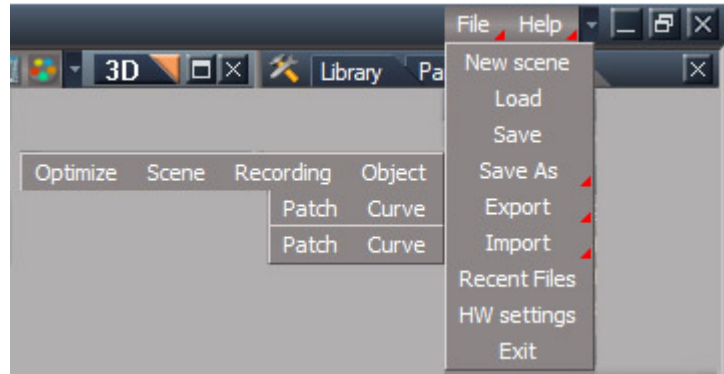
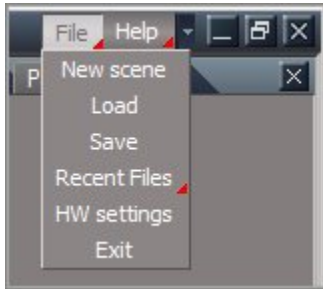
2.7.7 Perspective and Orthogonal Views

You can switch the view type from perspective projection to special orthogonal projections like top-view and front-view by clicking on the appropriate icons on the Workspace tool bar.



In the Unofficial Update the camera view is separate from the other views.

2.7.9 Workspace File and Help Menu



Unofficial Update File Menu

Save As > Optimize

Opens the Optimize Wokspace Scene panel used to clean the scene before saving as a recording file.

Model Attributes - setup to remove connectors added to the scene and scene objects from modelspace, also setup to remove Layer Info and PhotoRender nodes from the scene.

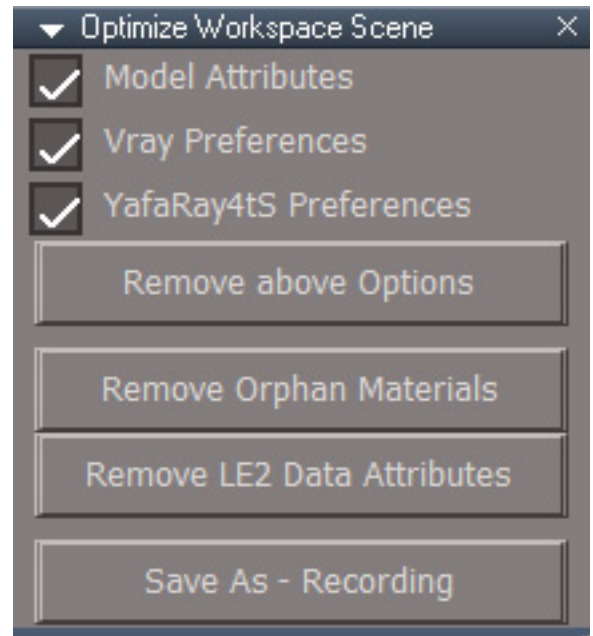
Vray Preferences - setup to remove Vray and PhotoRender nodes from the scene. Safe to use if you did not use Vray rendering for your scene.

YafaRay4tS Preferences - setup to remove the YafaRay4tS node from the scene. Safe to use if you did not use YafaRay rendering for your scene.

Remove above Options - executes the removal setup in the previous checkboxes

Remove Orphan Materials - If a mesh has multiple materials applied to it and the Separate Selection tool is used all the materials are copied which can result in orphan material nodes and connections.

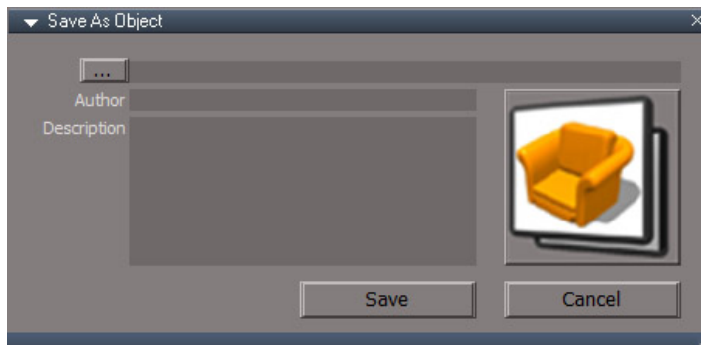
Remove LE2 Data Attributes - some scene items seem to have excessive numbers of LE2 Data connectors.



Save As - Recording - save the scene as an RsRcd file type. This has all the same information as a scene file but takes up much less file space

Save As > Scene file save as dialog with RsScn file extension as the only choice. More direct and convenient than using Save.

Save As > Recording save the scene as an RsRcd file. This format has a smaller file size than the default RsScn file format without any apparent lose of data.



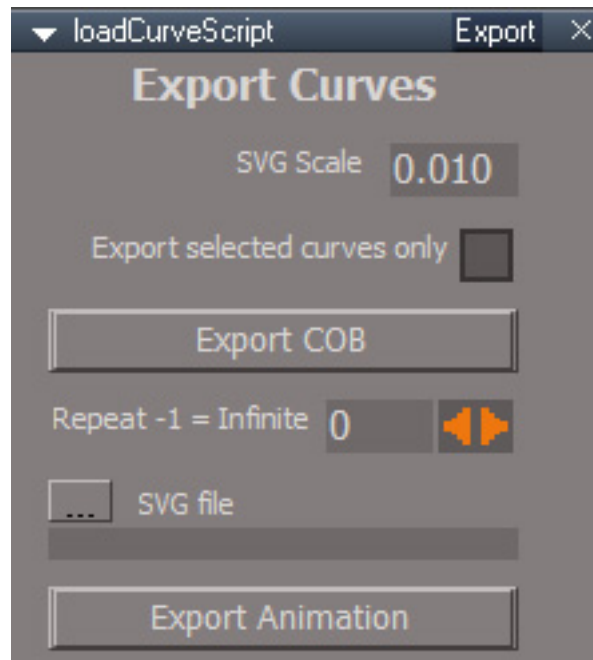
Save As > Object save object file, RsObj, with extra information

... button to choose a file name

Author and **Description** optional information to add to the file

Object icon button will reset but does not seem to do anything. Is this for decoration?

Save button to write the file to disc



Export > Curve

SVG Scale - default of 0.01 corresponds to 1cm in trueSpace translates to 1pixel in the svg file

Export selected curves only - don't export a curve unless it is part of the selection. All curves in the scene will export when unchecked.

Export COB - save in truespace modelside compatible ascii format(COB). Only curves will be exported.

Repeat - how many times to play the animation in the html file. A value of -1 means infinite repeats.

SVG file - input file to use when generating the sample html file

Export Animation - save html and CSS animation files to be used with the SVG file. Saves translation, rotation, scale and opacity(transparency) animations. Only animated items will export.

Open the html file to see the animation in a browser. The html file will have the same name as the css file created.

Import > Curve

Load curves from trueSpace scn and cob files generated from the modelside or earlier truespace versions. It also reads bezier curves from turbocad dxf files and svg format files. Most of the import options are for svg format files.

SVG Scale - default of 0.01 corresponds to 1cm in trueSpace translates to 1pixel in the svg file

Z Offset - each curve will be offset in the z direction by this amount

Import svg ellipse as polygon - imports ellipses or circles and converts them polygon meshes

Import svg line as polygon - lines and polylines imported as triangles each with only 1 edge visible

Import svg path as polygon - import curves and convert them to polygon meshes

Import svg rectangle as polygon - import rectangles as curves and convert them to polygon meshes

Close curve with a line - add a line from the end to the beginning of closed curves - option is only valid with non-polygon import

Seperate svg sub-paths - splits compound paths into distinct curves

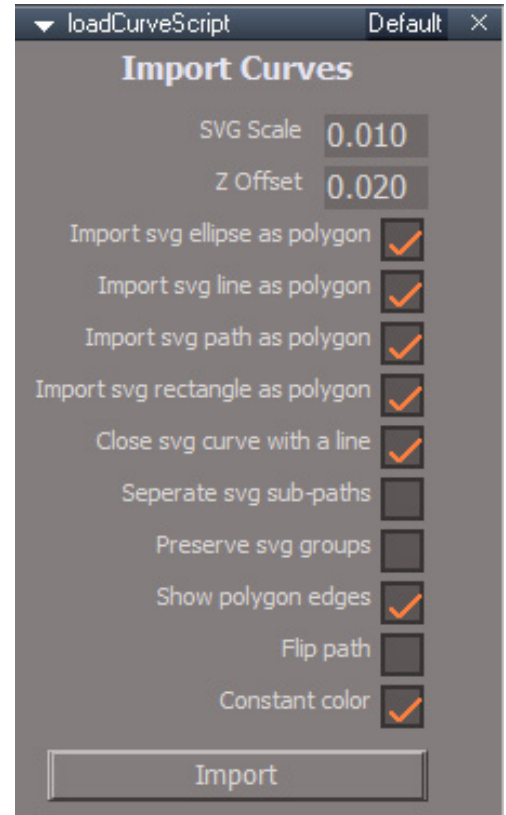
Preserve svg groups - if unchecked will ignore groups that have no transform values

Show polygon edges - items converted to polygon meshes will have edge visibility turned on

Flip path - reverses the direction of the curve resulting in a flipped normal for the polygons. not very useful since curves can go either way

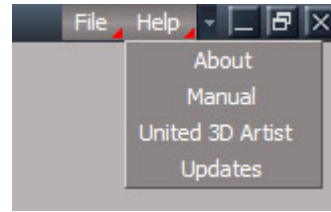
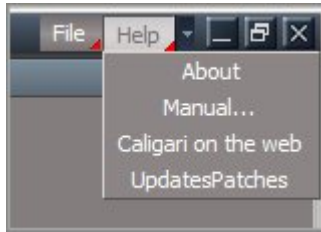
Constant color - use a constant color material for curves imported as polygons

Import - press to load a curve file.



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



Unofficial Update Help Menu

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.