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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
Z	Object Move tool
X	Object Rotate tool
C	Object Scale tool
A	Camera Move tool
S	Camera Rotate tool
D	Camera FOV tool

Global Shortcuts	
Key	Description
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

UV Editor Shortcuts	
Key	Description
CTRL Z	Undo
CTRL SHIFT Z	REDO

Info Panel Shortcuts	
Key	Description
CTRL Z	Undo
CTRL SHIFT Z	REDO

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

3D Window Shortcuts	
Key	Description
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
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

3D Window Shortcuts	
Key	Description
K	Set Key frame
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

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

Point Editor 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

Point Editor Shortcuts	
Key	Description
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
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

Point Editor Shortcuts	
Key	Description
~	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

Link Editor Shortcuts	
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
Numpad 9	Maximize & Arrange All
Numpad 3	Minimize & Arrange All
Numpad 5	Center All
Numpad 1	Zoom All
Numpad *	Iconize All
Numpad -	Minimize All
Numpad +	Maximize All
Numpad /	Arrange All
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

2.7 3D View – Workspace

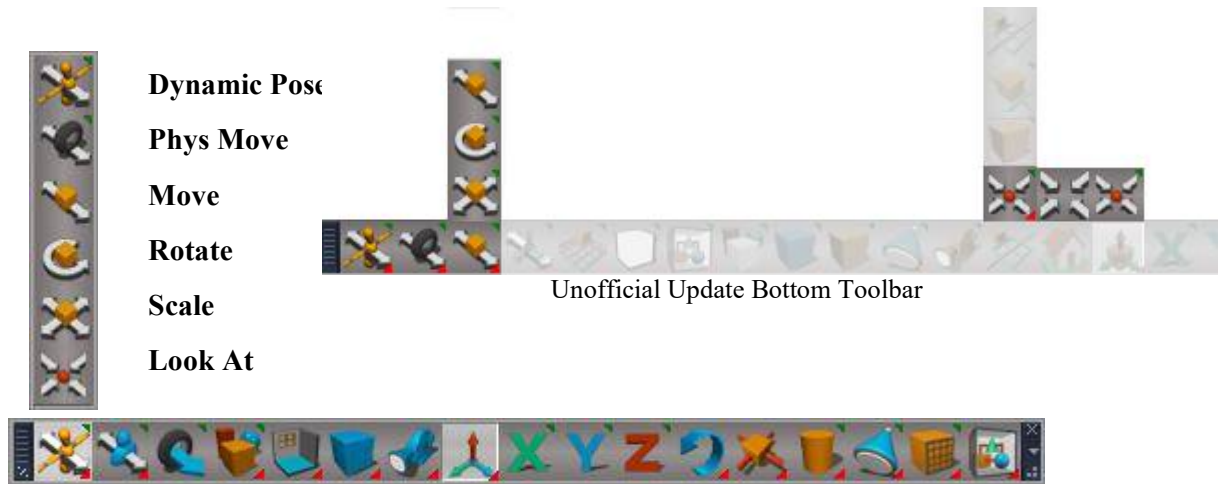
The trueSpace 3D Workspace view supports full Microsoft DirectX9 functionality for the real-time display of **transparency**, **normal maps**, **shading**, **pixel and vertex shaders**, and other effects. Complex lighting models, such as **real-time shadows**, and post-processing effects such as **glow** and **bloom**, allow you to pre-visualize your scene with complex materials, lighting, etc., before you render a final image.



The Workspace view shows realistic materials and lighting with real-time feedback

2.7.1 Object Navigation Tools

You can either use the object navigation widget to manipulate your objects, or you can use the navigation icons (**Move**, **Rotate**, and **Scale**), which are accessible from the navigation toolbar shown below. Each Workspace window includes a navigation toolbar by default.



Object Move Press the **Move** button to activate the tool. The Move tool remains active until another tool is selected. Left-click and drag to move the selected object along the X and Y axes. Right-click and drag to move the object along the Z axis. Movement occurs in the current coordinate system (**World/Object/Screen**), which you can set in the Workspace View title bar. RMB to exit tool.



Object Rotate Press the **Rotate** button to activate the tool. Left-click and drag to rotate the selected object in the Workspace about X and Y axes, Right-click and drag to rotate it around Z axis. Rotation is performed in the current coordinate system. RMB to exit tool.



Object Scale Press the **Scale** button to activate the tool. Left-click and drag to scale the selected object along the X and Y axes . Right-click and drag to scale the object along the Z axis. Scaling is performed in the current coordinate system. RMB to exit tool.



Object Look At



Object UnLook At

This command is used to make an object, camera, or light continually realign itself to remain pointed at another object. The program accomplishes this by automatically pointing the original object's Z axis at the second object's axis location (see the Axes tool). To use **Look At**, select the object that is to be constrained, select **Look At**, then select the target object. When an object is under **Look At**'s influence, it is constrained and cannot be rotated manually.

2.7.2 View Navigation Tools

The Workspace view camera can be manipulated using either the view navigation widget or the **Move**, **Encircle**, and **Zoom** view navigation tool icons on the navigation toolbar.



First Person Navigation

Camera Move

Camera Rotate

Camera FOV

Rectangle Zoom



Unofficial Update Bottom Toolbar



Unofficial Update Stack Toolbar



Look At Selection



Reset View





Camera Move Press the Camera Move button to activate the Camera/Eye Move tool. Left-click and drag to move the camera along the X and Y axes. Right-click and drag to move the camera along the Z axis RMB to exit tool.



Camera Rotate Press the Camera Rotate button to activate Camera/Eye Rotate tool. Left-click and drag to rotate the camera around the selected object in X and Y axes. Right-click and drag to rotate the camera around the Z axis in the Screen coordinate system. RMB to exit tool.



Camera FOV Press the Camera FOV button to activate the tool. Left-click and drag to change the field of view of the camera. RMB to exit tool.



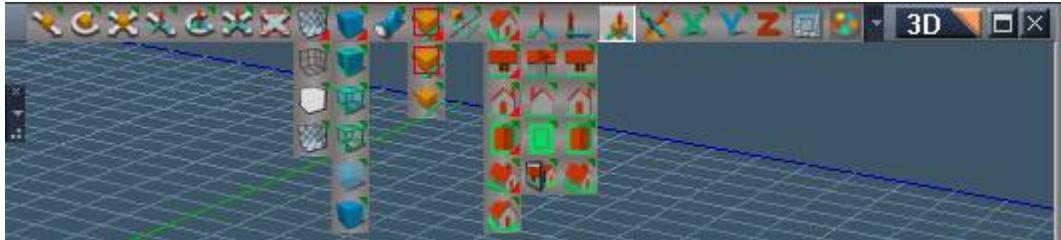
Look At Selection Left-Click on the tool places the active Workspace view so the current selection is in the center of the viewing area. RMB select and look at next object.



Reset View Left-Click on the tool places the Workspace view so the current selection is in the center of the viewing area.



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



Unofficial Update 3D Mini Toolbar

See previous pages and section 2.7.7 for explanation of repeated toolbar buttons



Perspective View



Isometric

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

Open New 3D View

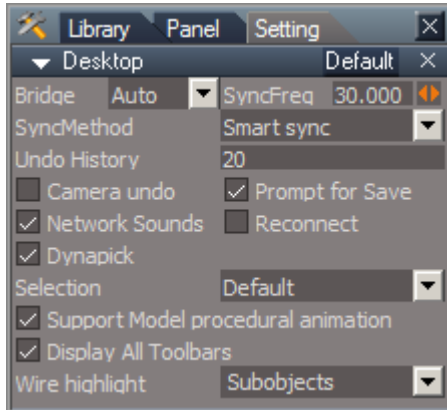


Open Material Editor

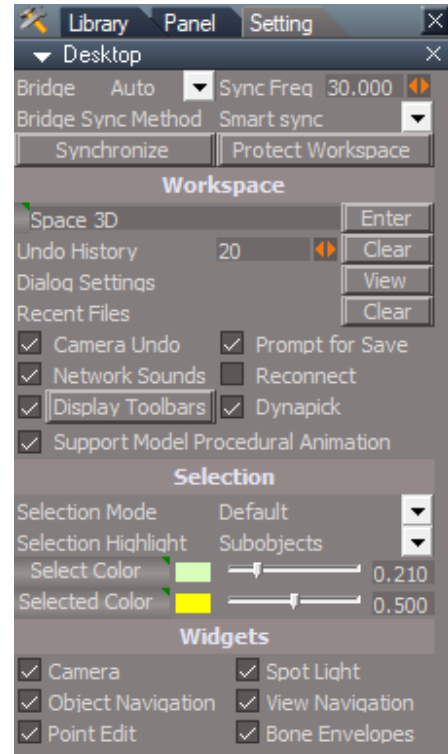
Set Camera RMB switch to perspective view.

Zoom To Selection RMB reset view.

2.7.6 Desktop Preferences



Desktop Default



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 picked object color.

Selected: Double click to Set selected object color.



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

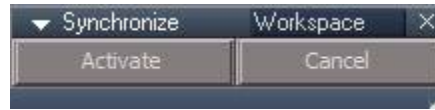
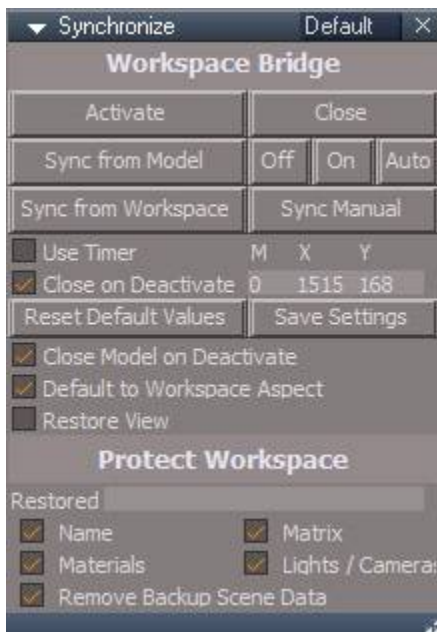
Matrix - stop transformation value changes

Light/Camera - stop change of spot light angle and camera fov

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

Usage:

- 1) Push the Backup button to backup the nodes and values
- 2) Open modelspace and do modelspace work
- 3) Close the modelspace window
- 4) Push the Restore button to retrieve the previous workspace state



Use Timer is not for animation, but is used for interactive update.

Workspace is the default aspect and runs in 100% automatic mode and will overwrite any user input in the Default aspect.

Default can be set as the default aspect by switching to the Default aspect and unchecking **Default to Workspace Aspect** and press the **Save Settings** button to make the change mostly permanent.

Reset Default Values sets all controls to the Workspace aspect run values.

Pressing any button in the Workspace Aspect will change the run time values to Workspace aspect default values. If you make any changes in the Default aspect do not press any buttons in the Workspace aspect or you will lose your changes.

Pressing any button in the Workspace Aspect will change the run time values to Workspace aspect default values. If you make any changes in the Default aspect do not press any buttons in the Workspace aspect or you will lose your changes.

What does this thing do? First reads the workspace animation range, sets the active flag and saves the user selection. The active enables the code that sees frame number changes and synchronizes the scene. Sets up protection of workspace values from modelspace changes. Gets the active 3d window or the first 3d window found active or not. The 3d window is switched to a perspective/camera view if it is an orthoganal view. The 3d view position and orientation fov etc. are saved and then copied to the synchronize camera. Then synchronize is set in timer mode or camera watchdog which looks for camera changes and syncs them to modelside?. Next it will open a model view window if one is not open already. Set the synchronize camera as the active camera for the 3d view and set modelspace to the same camera and restore the user selection.

Synchronize scene script is run at each timer change or camera change. Synchronize scene does not sync the scene but syncs the parent camera object.

Looks like maybe the timer is broken – only syncing the camera not the scene. The old script timer synced each renderable item in the scene, one by one. Test shows even though only camera is synced the entire scene seems to get synced. Timer maybe obsolete unless physics or someother procedural anim needs it – doubt it.

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

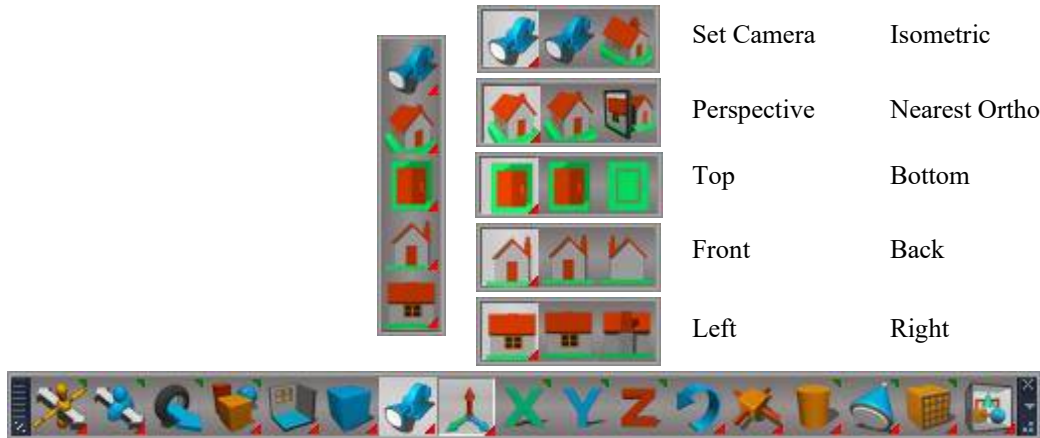
Sync from Model, Sync from Workspace one button sync which answers the content synchronization dialog automatically.

Sync Manual one button press to open the content synchronization dialog.

See earlier pages for protect workspace notes, **TODO cleanup and add info for each check box option.**

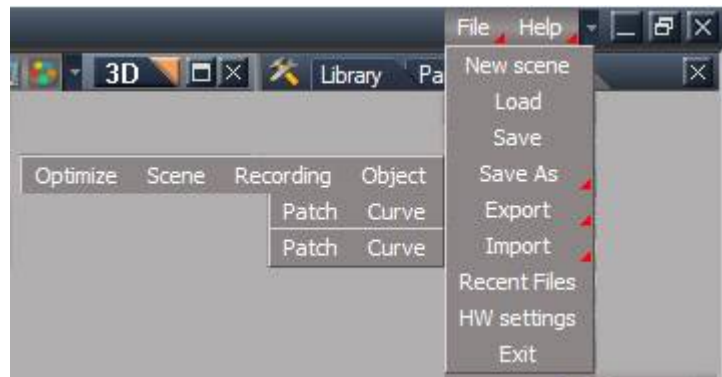
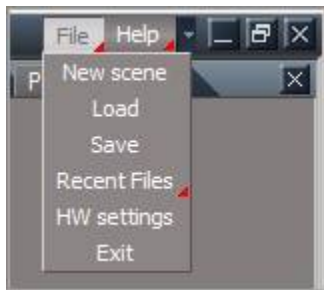
2.7.7 Perspective and Orthogonal Views

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.



2.7.9 Workspace File and Help Menu

Although most of the actions in trueSpace can be accomplished through icons, there are two menus available: File and Help. The File menu has options for loading and saving objects, as well as access to the Workspace Hardware Settings.



Unofficial Update File Menu

Save As

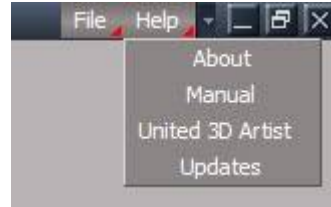
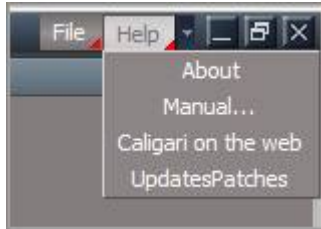
Optimize, Scene, Recording, Object – [TODO more info](#)

Export

NURBS Curve, Patch

Import

NURBS Curve, Patch



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.

Help: Manual

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

Help: Caligari on the web

This will take you to the Caligari web site where you will find all the latest information about trueSpace, including plugins, forums, and user galleries.

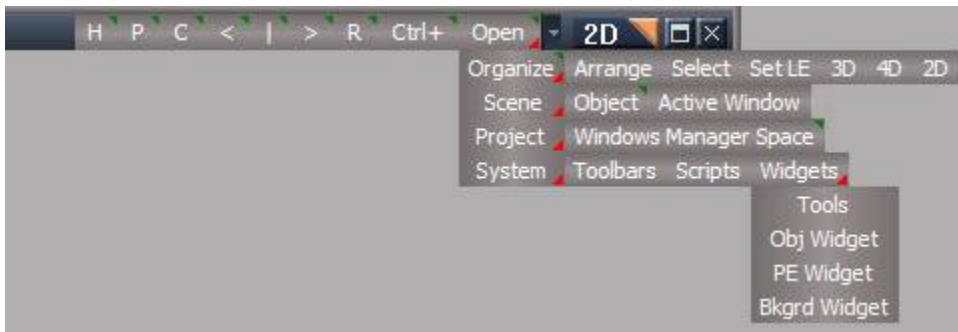
Help: Updates and Patches

Look to this area for updates as they become available.

2.8 2D View – Link Editor

2.8.1 Link Editor Description

To edit any object in trueSpace requires that you must first enter it. This is true whether you are viewing an object in 1D, 2D, or 3D aspect. Here in the Link Editor, which is the 2D area of trueSpace, you will eventually enter and work with objects. The Link Editor provides you with a toolset to browse, assemble, analyze and modify the structure of objects.



Unofficial Update Link Editor Mini Toolbar

Mini Toolbar

H : (3D View) LMB hide unselected, RMB show all

P : LMB select parent(owner) node, RMB open selected node in the link editor

C : LMB select first renderable child node, RMB open selected node in the link editor

< : LMB select previous renderable sibling node, RMB open selected node in the link editor

| : LMB center the selected node in the view, RMB select next renderable sibling node in the link editor and center it

> : LMB select next renderable sibling node, RMB open selected node in the link editor

R : (3D View) LMB start rectangle select tool, RMB open options panel

Ctrl+ : LMB simulate ctrl button press and hold, LMB again to end ctrl button behavior, RMB deselect

Open :

Organize : LMB minimize nodes and arrange, RMB maximize nodes and arrange

Arrange :

Select : open the Select and Alphabetize panel (see next page)

Set LE : set the currently active link editor window as the window to receive link editor commands

3D : switch active window to a 3D aspect

4D : switch active window to a 4D animation aspect

2D : switch active window to a 2D link editor aspect

Scene : open link editor to the scene

Object : open link editor to the selected object

Active Window : open link editor to the active window

Project : open link editor to the project

Windows Manager Space : open link editor to the windows manager space

System : open link editor to the top level root

Toolbars : open link editor to the toolbar prototypes encapsulator

Scripts : open link editor to the scripts

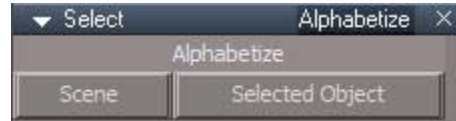
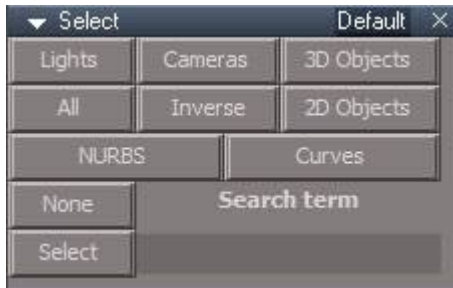
Widgets : open link editor to the active widgets

Tools : open link editor to the widgets tools

Obj Widget : open link editor to the object navigation widget

PE Widget : open link editor to the point edit navigation widget

Bkgrd Widget : open link editor to the background widget



Select Default Select items based on their common characteristics.

By object type : Lights, Cameras, 3D Objects, 2D Objects, NURBS Patches and Curves.

Modify selection: All, None, Inverse.

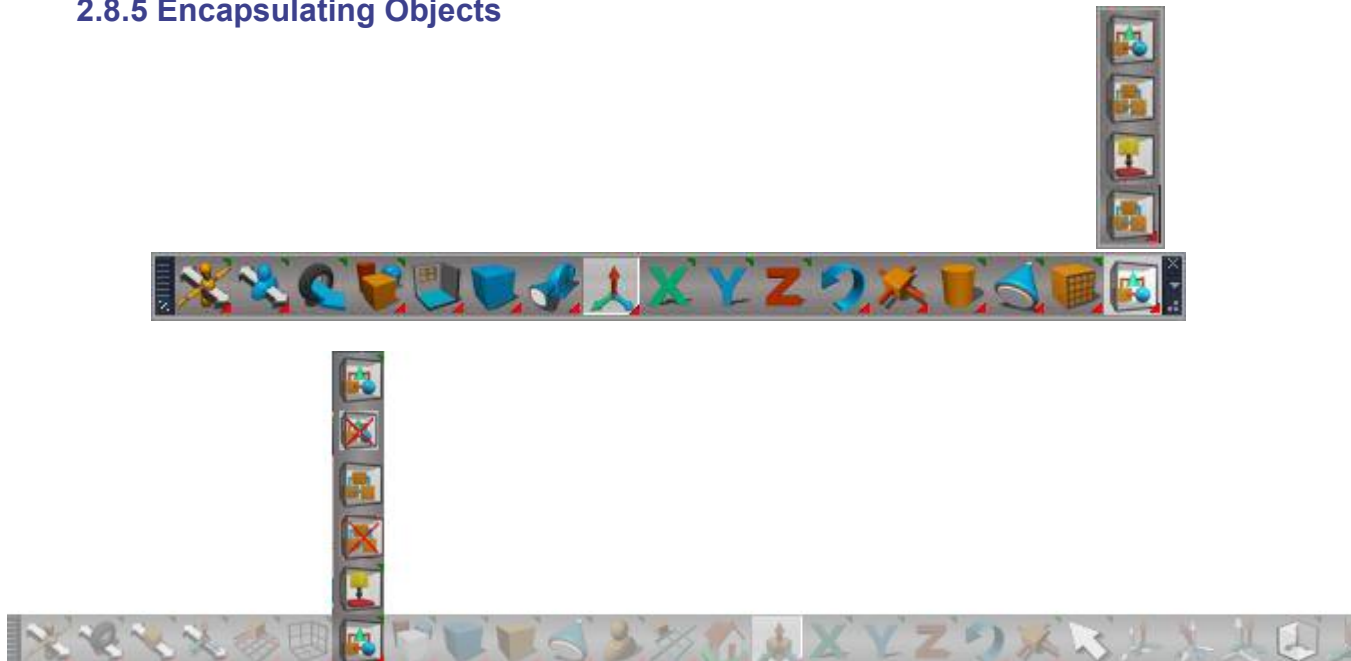
Name matching: Enter a search term in the text input field and press the **Select** button.

Select Alphabetize Order the objects in alphabetical order by a delete and restore process.

Scene : Alphabetize the scene.

Selected Object : Alphabetize the nodes inside the selected object.

2.8.5 Encapsulating Objects



Unofficial Update Bottom Toolbar



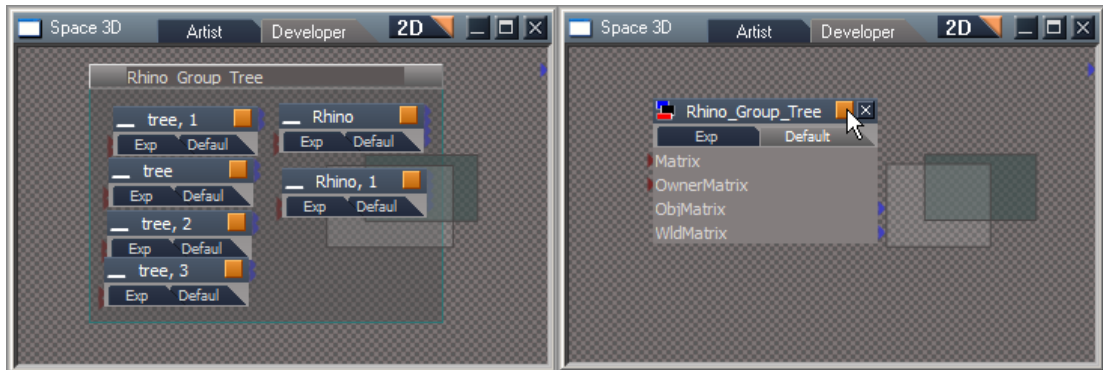
Encapsulate in 3D



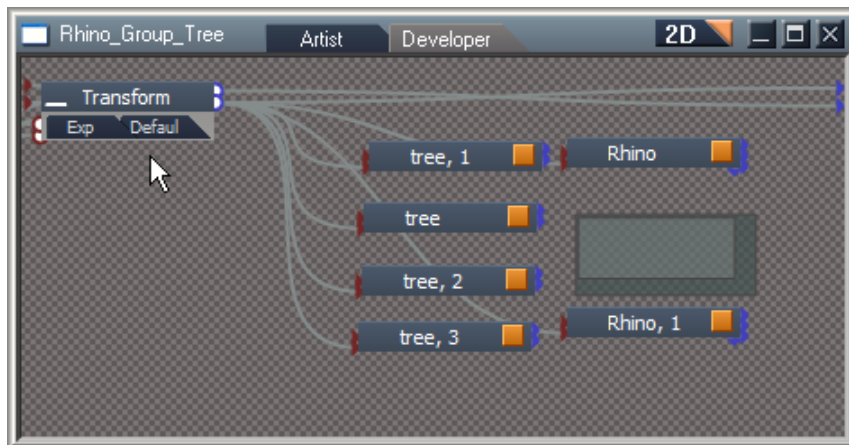
Unencapsulate in 3D

The Encapsulate In 3D tool makes a group, and within that group each original object is still a separate individual entity, which can be manipulated separately from the other objects in the encapsulated group.

Example: the scene has several elements , rhinos and trees which can be managed better by combining them into a single object, this will allow for easier and less cluttered scene management and also the group of objects can be saved and copied the same as any regular object.



Give a name and press Return on the keyboard, then enter the new object by its orange square



Inside the group each original object is still separate and can be selected individually



Encapsulate Objects



Unencapsulate Objects

The **Encapsulate** tool, located in the Link Editor toolbar, is used to enclose a group of selected objects inside a new container object. Any connected attributes will be automatically exported from the container object, and existing links will be maintained. This tool is best used on objects that don't have a mesh representation e.g. for math functions or scripts, if you need to be able to see and move a mesh based object in the Workspace then you would use the encapsulate in 3D tool instead.

2.12 Other Views

 <i>Add New Windows</i>	- Make copy of Window 3D Window - Link Editor - Command Prompt - Command History - Output Console - Status View - Stack View - Anim View - Package Manager - Scene View	 <i>Unofficial Update Stack Toolbar</i>
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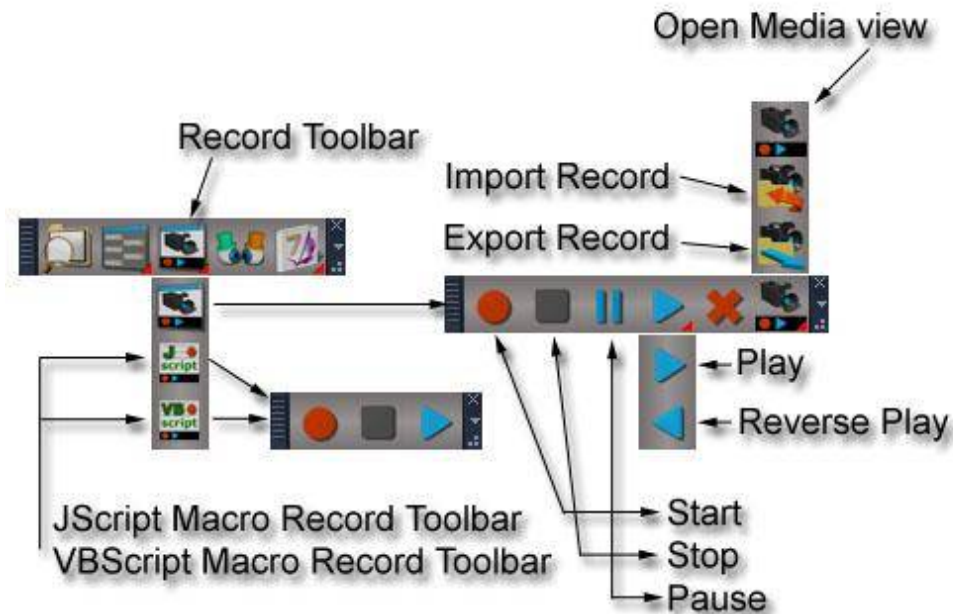


Quad Window

Opens a viewport composed of 4 3D windows in a 2 by 2 arrangement. RMB Saves Quad Window's user modifications



2.13 Macro Recording and 3D Recording



2.13.1 Macro Record

Macro Record – jScript. RMB create a blank jscript command node in the scene.

Macro Record - VBScript RMB create a blank vbscript command node in the scene.