LightWave to XSI Quick start

I have recently noticed a migration of LightWave 3D users, professional to hobbyist converting or adding Softimage's XSI to their tool set. I have decided to create this document to introduce them to XSI as well as others that are considering making the same move.

I and others have mentioned that migrating from LightWave to XSI is a much smoother transition than migrating from LightWave to other applications. The following document will cover functions in LightWave 7.5 and XSI 3.0

Topics Covered

- Interface and Navigation
- Modeling
- Materials
- Animation
- Lights
- Cameras
- Rendering
- Resources

Some Interface Shortcuts

LightWave	XSI	XSI Hotkey
Modeler	Model	1
Layout	Animate	2
	Render	3
	Simulate	4
Graph Editor	Animation /Fcurve Editor	0
Scene Editor	Explorer	8
Image Editor	Image Clip Viewer	Alt+6
Surface Editor	Render Tree	7
Viper /Limited Region	Render Region	q
Motion Mixer	Animation Mixer	Alt+ 0
Make Preview	Start Capture	NA
Numeric Panel	Property Editor	Enter
Spread Sheet	Spread Sheet	Alt+3
Texture Guide /UV Map	Texture Editor	Alt+7
Pivot Point	Center	NA
Compositor	FX Tree	Alt+1
Render Options	Render Options Property Editor	NA
Camera Properties	Camera Properties	NA
Move	Translate	V
Rotate	Rotate	C
Stretch	Scale	X

Interface and Navigation

LightWave allows you add custom tabs to your layout; XSIs Layout can be completely modified or created. You can also save and load layouts from other XSI users.
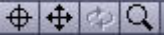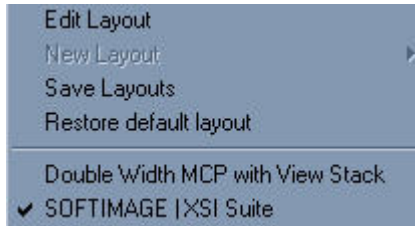
Unlike LightWaves Modeler and Layout, XSI contains all of it's modules within the same workspace. The main modules are broken into different tabs

These modules are located on the upper left hand side of the interface while a majority of your modifications occur in the MCP (Master control Panel) on the right hand side of the screen

LightWaves Center, Pan, Orbit, and Zoom equivalent in XSI is the **A** key for centering in the current viewport, **Shift+ A** to **center** in all viewports and **F** to **frame** a selected object or objects. **Z +MMB** and **Z+RMB** to **Zoom/Pan** in and out, **O+RMB** for **Orbiting**. You can also use the **S** key with mouse button combo to **navigate or rotate** around your scene.

XSI uses the 3 button mouse extensively for all of its commands. When you select a command look at the bottom of the interface to see what the button functions are for that particular command.

| L | Translate in X | M | Translate in Y | R | Translate in Z |

XSI also remembers you last command and lets you repeat them by MMB Clicking on the command that was last used.

XSI also uses a term called Sticky Keys, with sticky keys enable you can just tap on the keyboard shortcut to enable its function. You can also use that function with a combination of another for example if I tapped on the **S** key to **navigate** around the scene, I can then hold down the **O** key to **orbit**, once I let go of the **O** key I am back to navigate mode.

Sticky Keys option is found under File > User Preferences > Interaction > Enable Sticky Keys.

Modeling (XSI provides Nurbs Modeling in addition to its Polygon /SubD modeling tools)

Metanurbs (LWs SubDs) are similar to XSIs subds but XSI gives you a couple of ways to access and modify them. The Tab key equivalent in XSI is the **+** key. This key can be pressed 4 times to change the geometry approximation (Density of the model) you can hit the **–** (minus) key to lower the density.

You can also change the Geometry Approximation by clicking on the scene button and locating the current object.
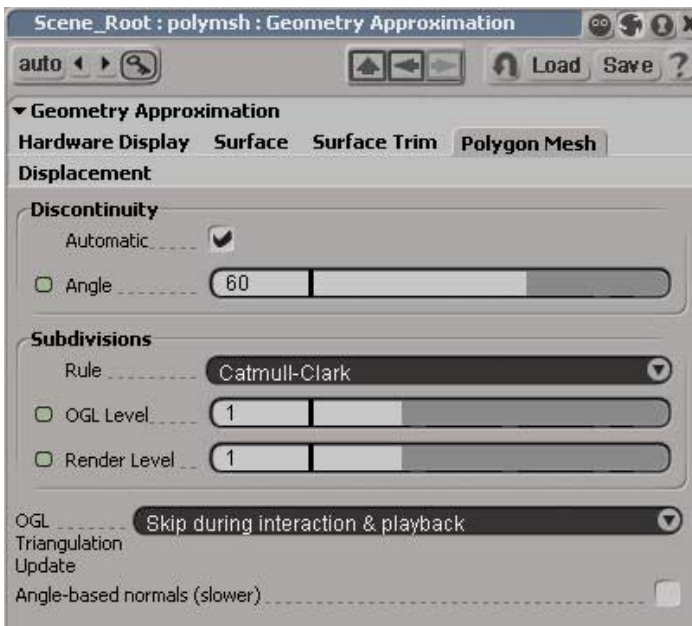
Double clicking on Geometry Approximation will bring up the following property editor.

The icons on the top of the property editor let you focus, Recycle, or Lock that editor's page.

The up, left and right arrows cycle through previous property editor that you might have accessed before the current editor.

The auto and key icon are keyframe functions.

You can also select Polymesh >Subdivision from the Model module.
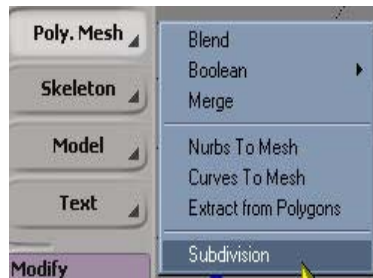
If you're in wireframe view you would see the cage and subd object similar to LightWave.

If you select a shaded view you will notice that your subd object and cage are both shaded. If you want to view the cage in wireframe and the subd object in shaded mode you will need to go into the property display of the cage object then select Wireframe for Static and then click on Copy static selected mode to all.
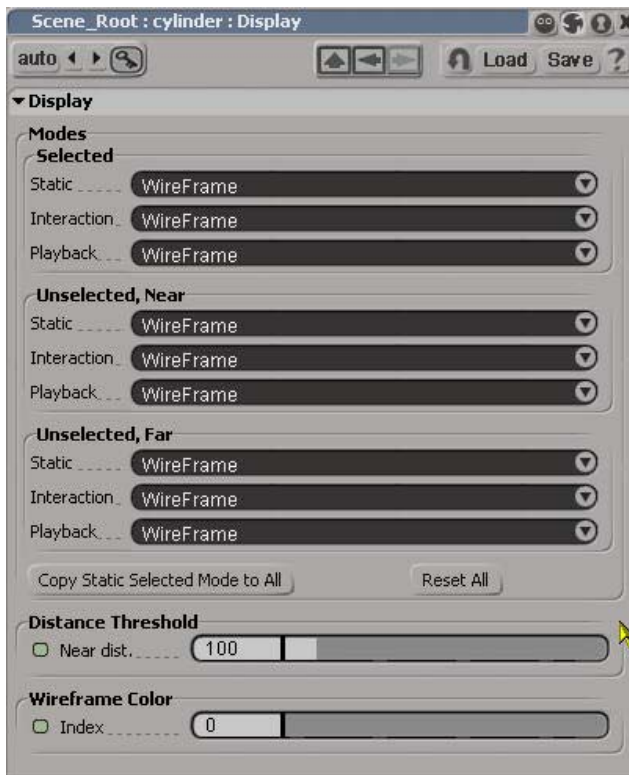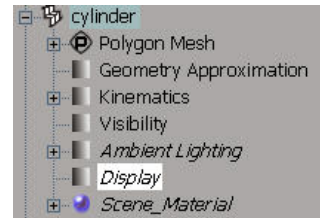
The final Step is to uncheck the Override Object Properties which will give you the results below.
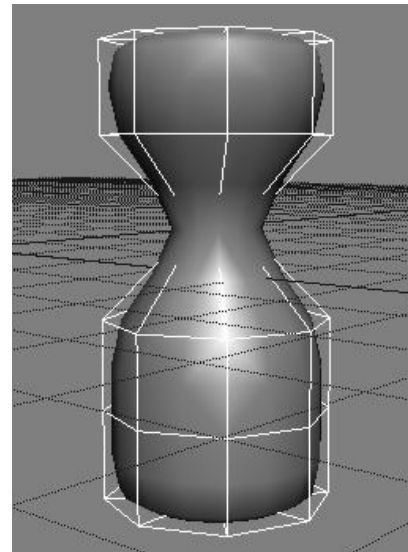
Selecting

Selecting objects and components
Can be accessed from the MCP.

You can toggle on or off the selection of
any object at any level (node, branch, or
tree) using the left, middle, and right mouse
buttons respectively. More than one object
can be selected, unless Select Single
object in Region is selected.

Object	Space
Object (Extended)	Shift + Space
Point	T
Point (Extended)	Shift + T
Edge	E
Edge (Extended)	Shift + E
Raycast Edge	I
Raycast Edge (Extended)	Shift + I
Polygon	Y
Polygon (Extended)	Shift + Y
Raycast Polygon	U
Raycast Polygon (Extended)	Shift + U

The following Hotkeys on the left can be
used as well, coming from LighWave you are
accustomed to the lasso selections fear not
XSI has them as well by hitting the **F8** key.

The Move point Tool (**M** key) in XSI is similar
to Drag in LightWave and XSIs Proportional
Modeling tool is similar to Dragnet.

Layers

XSI has a layering system as in LightWave and can be access from the MCP or
hitting the **6** key.

In the layer control you can select if you want to view, render, the objects visibility
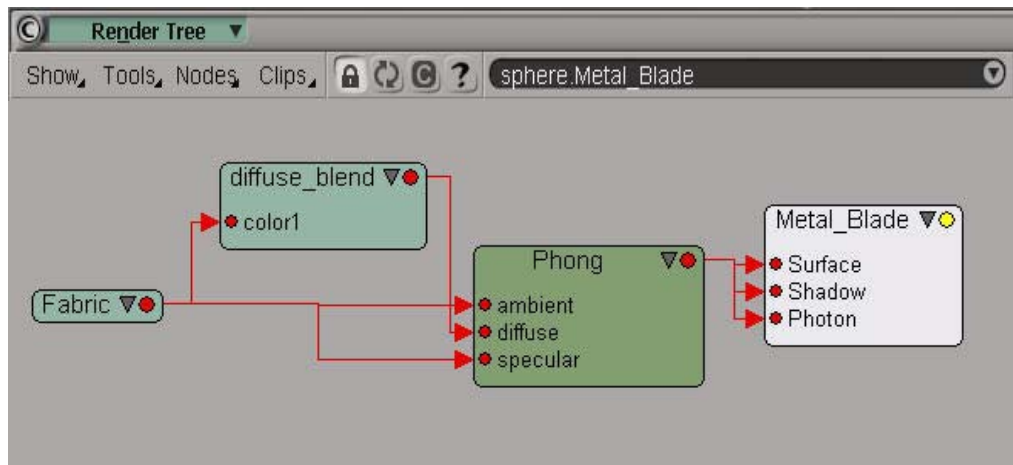or selectbility.

Materials

Applying your materials in XSI occurs in the Render Panel (**3** key) then choose Get > Material> Phong or any other material type.

You can then assign texture projection by selecting Get <Texture <Texture Projection and selecting the desired mode.

You can do the same functions in the Render Tree (**7** Key) as well by adding and modifying your nodes.

A node is the generic term for a module that reads input values, processes these values, and gives specific output values as results.

There is no shader ball to preview your textured objects in XSI but you can preview them interactivly with the Render Region (**q** key) you hit q and drag a region in the area that you want to focus on and you will get an instant preview. See more info on Render Region in the Render section of this document.

Coming from LightWave you are used to having Procedural textures at your disposal. Procedural texture creation in XSI is accessed through the Render Module>Get>Texture or using the Texture Generator and Texture Projection Nodes in the Render Tree.
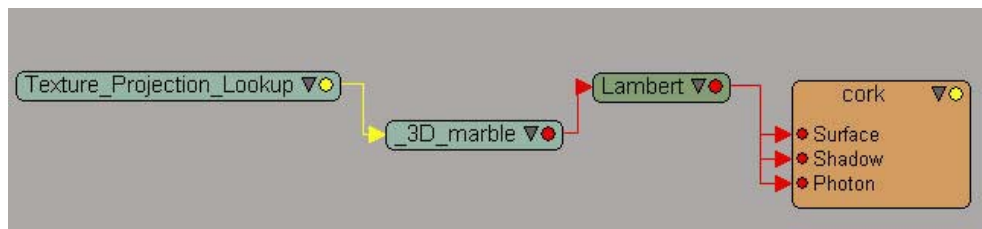
LightWaves texture reference object equivalent in XSI is modify projection (**J** key)

Animation

XSIs animation capabilities are endless and is where this product really stands out amongst its competitors. It is a total nonlinear animation system and topics discussing all of its functions could take months.

XSIs timeline can be viewed in keyframe or dope sheet mod via the playback button.
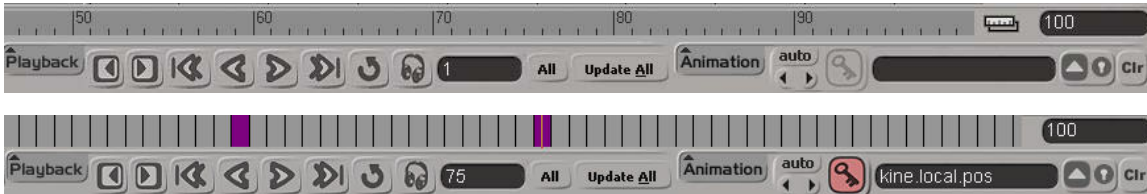
You might notice these boxes on any property editor these boxes are similar to the E (Envelope) button in LightWave Green indicates that there is no Change made, Yellow indicates that a change was made but no keyframe was created and Red indicates that there is a keyframe made. Right clicking on the parameter will give you access to a submenu.
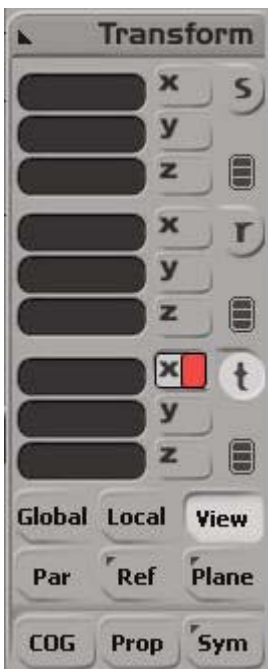
The **K** key is the short cut to set keyframes.
In order to create keyframes a parameter must be selected (Scale, Rotate or Translate) to record the keyframe.

XSI has a feature to set and record specific parameters that you want animated, this feature is called Marking Sets. The menu can be access from the animation Button on the timeline then choose Parameter.
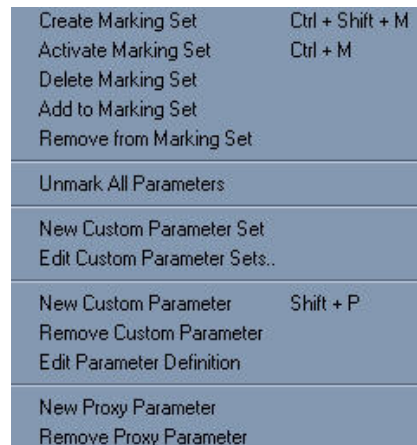
Sliders can be accessed in 2 ways. One is called Virtual slider which is activated by highlighting a parameter and hitting the F4 key.

Your mouse will turn into a double arrow icon and then you can start dragging anywhere in the viewport to see the changes.

The second option is more like LightWave's sliders with the exception that 1. They are not Transparent and 2. in XSI you can add sliders to just about anything in your scene. To Create slider you will nee to go to the Animate Module >Create >Parameter.

You can add sliders by drag and dropping parameters from any other property editor. In this sample I dragged the Geometry SubD Value in U as well as the X, and Z translation values. You can now adjust your sliders by clicking and dragging the value bars.
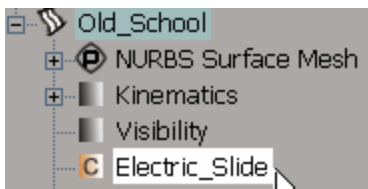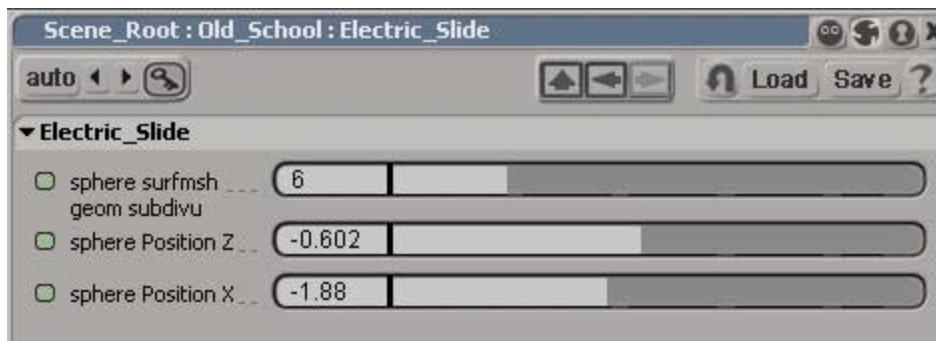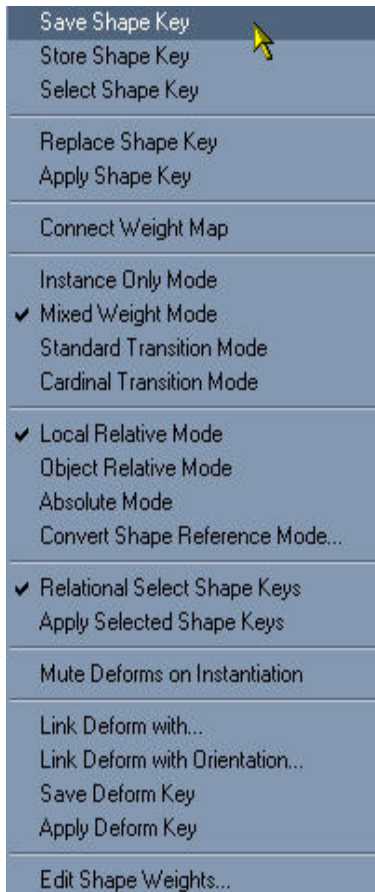
Custom Parameters can be viewed in the Scene explorer and are shown with the Orange colored box with the letter C.

Endomorph equivalent in XSI is called Shape Animation. As in Endomorph's you start out with a Base shape and then use continue adding modified versions as targets.

Deform
Shape

In XSI this is accessed in the Animate Module >Deform >Shape Notice that you have relative and absolute mode as in LightWave plus additional options to choose from.

Save Shape Key
Store Shape Key
Select Shape Key

Replace Shape Key
Apply Shape Key

Connect Weight Map

Instance Only Mode
✔ Mixed Weight Mode
Standard Transition Mode
Cardinal Transition Mode

✔ Local Relative Mode
Object Relative Mode
Absolute Mode
Convert Shape Reference Mode...

✔ Relational Select Shape Keys
Apply Selected Shape Keys

Mute Deforms on Instantiation

Link Deform with...
Link Deform with Orientation...
Save Deform Key
Apply Deform Key

Edit Shape Weights...

You can keyframe your shapes by creating clusters of the points you tagged and then animating them via the timeline, Sliders, or Animation Mixer

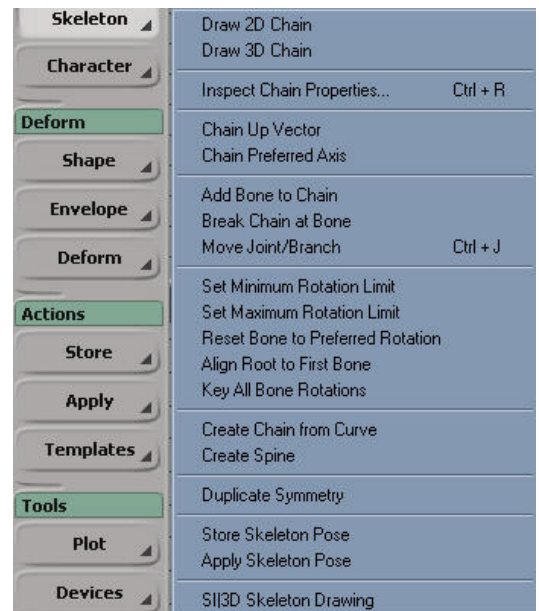To save your shapes you can use save shape Key or Store Shape Key.

Saving shape keys creates a shape key and a shape clip from the current frame in the animation mixer.

Storing shape keys creates a shape key at current frame, but a shape clip is not created automatically in the animation Mixer.

The process of adding bones to a character in XSI is called Enveloping. All of these features can be found in the Animate tab of the interface. You have the option to create 2D or 3D bones and the enveloping process in XSI is very intuitive.

XSI 3.0 Character Animation tools have been improved and now include new quadruple type rigs as well as new Rig Guide Tools and a character maker tool set.

In my opinion Softimage is setting the standards again for Character Rigging and animation tools.

Skeleton
Character
Deform
Shape
Envelope
Deform
Actions
Store
Apply
Templates
Tools
Plot
Devices

Draw 2D Chain
Draw 3D Chain
Inspect Chain Properties...   Ctrl + R
Chain Up Vector
Chain Preferred Axis
Add Bone to Chain
Break Chain at Bone
Move Joint/Branch   Ctrl + J
Set Minimum Rotation Limit
Set Maximum Rotation Limit
Reset Bone to Preferred Rotation
Align Root to First Bone
Key All Bone Rotations
Create Chain from Curve
Create Spine
Duplicate Symmetry
Store Skeleton Pose
Apply Skeleton Pose
SI3D Skeleton Drawing

LightWave's Motion Mixer equivalent in XSI is called the Animation Mixer
(Alt+0 key)

Instead of creating Actors, Motion files, etc like in Motion mixer. With Animation
Mixer you just store the action you want within XSIs Animate module. You
previously saw how you were able to store shape keys for use within the mixer.

In addition to storing the
following animated
parameters, XSI allows
you to store Skeleton
poses for pose to pose
base animation.
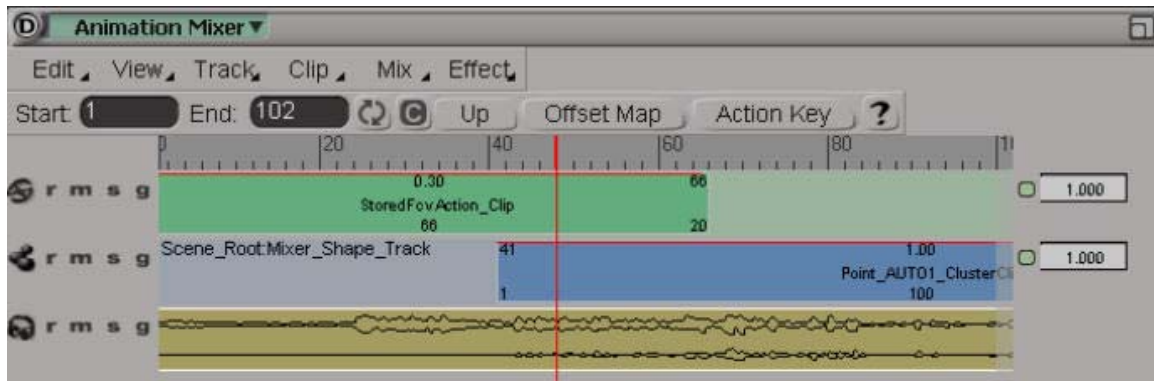
Animation tracks are in Light Green, Shape Tracks are in Blue, and Audio tracks
are in the Sand color. Unlike Motion Mixer which normally overrides the controls
of an animation clip, the Animation Mixer is non destructive meaning you will
always have access to your original animation data.
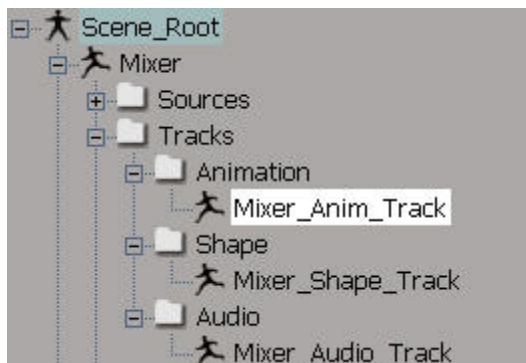
All tracks can be saved and later reused
for future reference. Here is a Scene
Explorer view of the tracks.

Lighting

Lights in XSI are very similar to LightWave. Here's a breakdown of the types of lights that are provided in XSI.

Infinite: Creates a new infinite light and places it at the center (origin) of the scene's 3D world.

Light Box: Creates a type of spotlight and places it at the enter (origin) of the scene. The light box has a definable light cone like a spot light but is diffused so it emits no specular light.
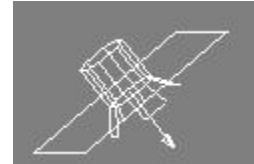
Neon: Creates a new light shaped like a neon light cylinder at the center of the scene's 3D world.

Point: Creates a new point light and places it at the center (origin) of the scene's 3D world.
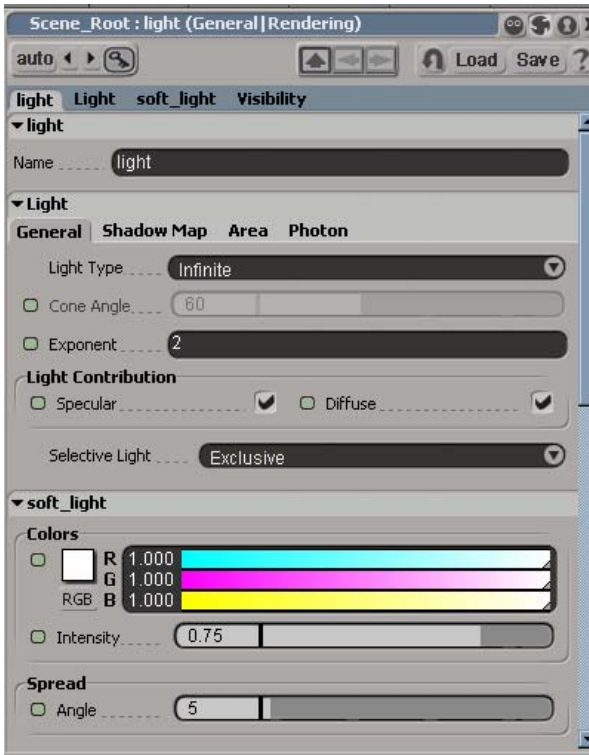
Spot: Creates a new spotlight and places it at the center (origin) of the scene's 3D world.

When you use Spot or Light Box a Light interest (Null) is automatically created same as when creating new Cameras.
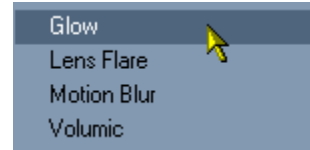
Lights are hidden by Default in XSI. You can unhide them by going to the scene explorer selecting the light and hitting the **H** key to unhide it.
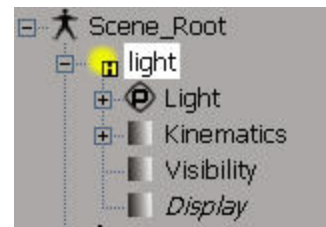
Hitting the **enter** key on any object will open its property editor.

You can assign Lens flares and Volumetric properties by going the Render panel and selecting Get >Property

If you enable shadow maps, GI, etc in the Lights Property editor you will need to enable it in the Render Options menu.

The photon Tab holds properties for Caustics and Global Illumination. XSI also has a third option called Final Gathering which is similar to GI but much faster. The image on the right was rendered using Final Gathering.

XSI 3.0 now includes the ability to create and use HDRI for lighting and can be access in the Render Module >Pass >Edit >New Pass >Image based Lighting.
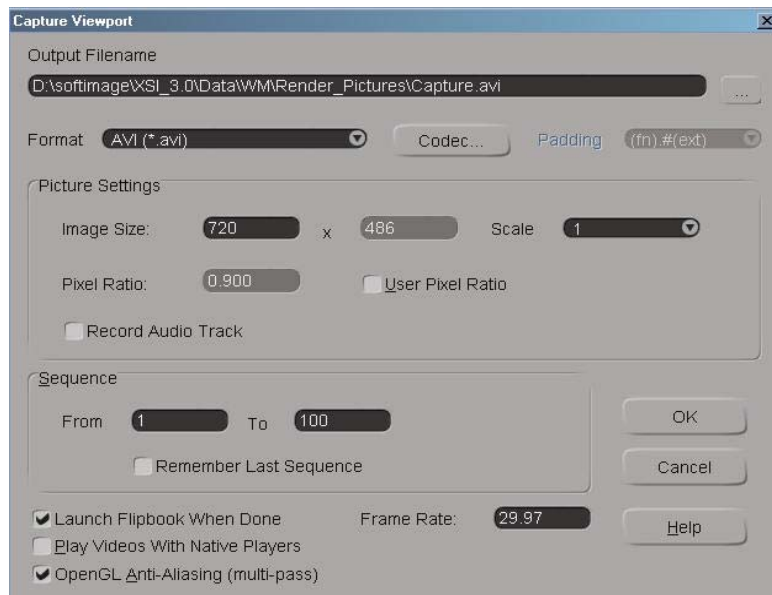
Camera

Cameras in XSI are somewhat different than LighWave in the sense that some functions that you find in LightWaves camera properties like Antialiasing, Motion Blur, Fields etc are not found in XSIs camera property editor but in the Rendering option instead. As with Spot and Light Box lights XSIs default camera and any camera you create, automatically creates a camera Interest.

You can store 4 Different views in any viewport including the camera. To store a view MMB click on any of the empty boxes, the box will turn orange once the view is stored. You can then rotate, pan your view and store that option in a second box then switch back and forth between views by clicking on the Orange box with the LMB, to remove your views RMB on any of the boxes.

Clicking on the Camera Icon will give you access to the following menus on your left. Start Capture is the same as Make Preview in LightWave. It captures the cameras viewport in the currently selected display mode (OpenGL, Wire Frame etc) and then gives you the option to play it back with XSI Flipbook player or your native media player.

Properties are where you would change the format i.e.: PAL, NTSC, HDTV etc. Also if you wanted to add DOF or Z-Buffer support you would add then in the lens shader tab. XSI 3.0 now includes a Fly, Walk, and Drive tool which can be used to test different camera moves interactively directly within XSI, using simple "game-style" controls.

Rendering

XSI 3.0 comes standard with the Mental Ray 3.1 both LightWave and Mental Ray's Rendering Engines are favored by the industry along side with Pixar's Renderman, but XSI has the advantage because Mental Ray is fully intergraded within the application.

Render Region (**q** Key) is a combo of Viper and the Limited Region option in LightWave but times that by 10.
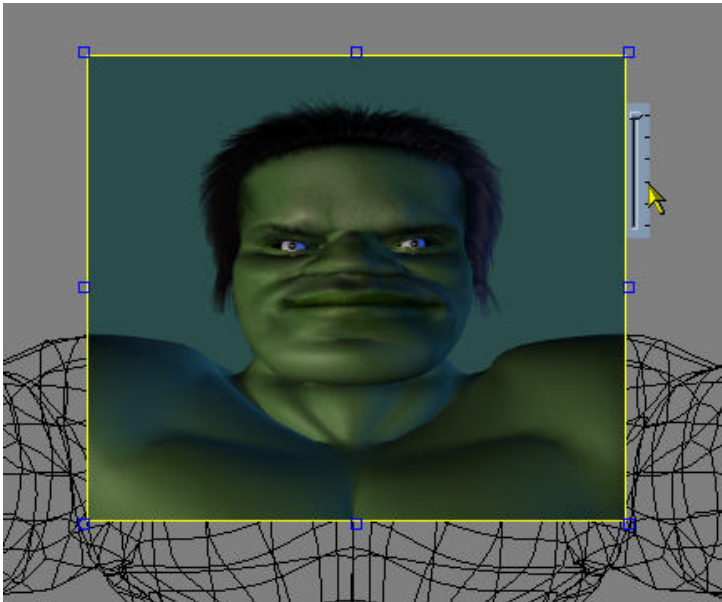
There is no need for special preparations like Viper (i.e. Surface data or enabling in the render options panel) and Unlike Limited Region, which is limited to LightWave's Camera view, Render Region can be drawn in any viewport.

The region has a slider that can adjust the quality of the preview that you preview and it renders pretty quickly and accurately.

As in LightWave you have the abilities to save you previews as well as modify the regions properties which Are separate from the final renders property.

Items can be selected from the Render Region window as well as having the ability to render that selected object.

Unlike LightWaves render Buffer Export XSI lets you render your current pass or all of your passes all at once. LightWaves PSD Export renders out the passes you select but they can not be accessed individually in LightWave itself. All of XSIs passes are accessible within the interface.
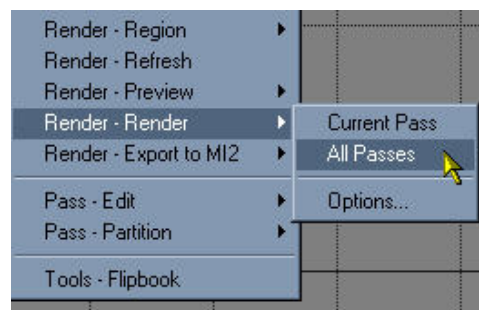
Render Options is where you configure your final output of your scene.

Frequently Asked Questions

Q: How do I change the background color or add a background image in XSI

A: In Render panel Pass > Edit Current >Output Shader > Add. Select 2D_background_color or 2D_background_pic the inspect button lets you modify the settings.

Q: what is the equivilant to the tab key in LW?

A: The + key in XSI will increase the subdivision display levels in your object and the – minus key will decrease them.

Q: Is there a Bandsaw function in XSI

A: use the shift-d quick key while a single edge is selected and check the parallel edgeloop function. This does exactly what the bandsaw function does and you can add many uniform subdivisions as well just like in lightwave. I also recommend you get this free plug-in http://www.claus-figuren.de/3d/rt

Q: I know "Extender" (plug-in for Lightwave that extrudes edges). What about in XSI?

A: Select the Edge the hit Ctrl+D then translate the edge this applys to polygon extrusion as well.

Q: How can I import my LW models and scene files.

A: Okino Polytrans is a commercial application that can do this function there is a free HRC export plug-in by Dstorm that lets you export your models in Softimage Hrc format then you can import that format in XSI you can get the plugin from our friend Ed Harriss http://www.edharriss.com/xsi/tools/tools.htm

Q: How do I weld points in XSI

A: To move a point and weld it with another on the fly just hold down the M key and then Alt. when you move it will snap /merge to points.

Thanks to the XSI Base members for there question ,suggestions, and answers and to Dan Ablan for the QC process.