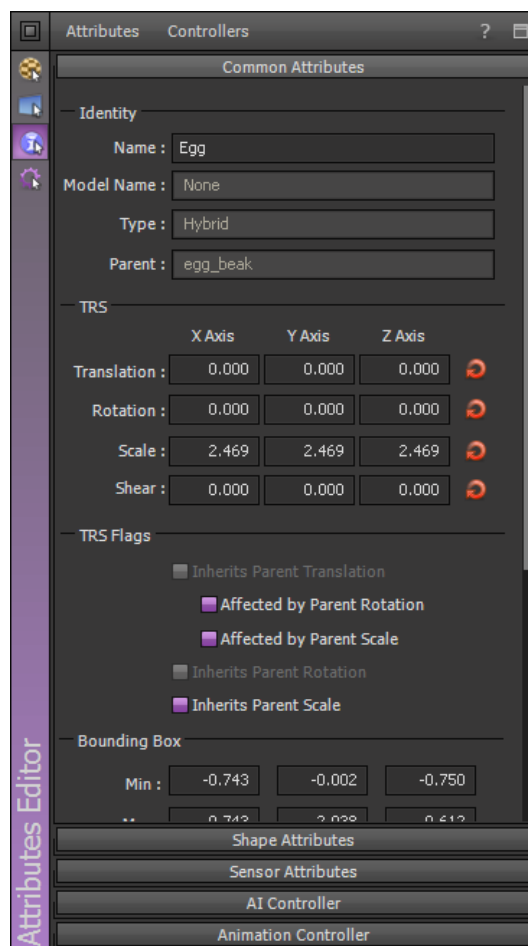


Attributed to You

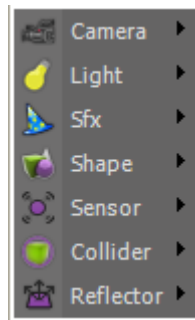
In this Chapter I'm going to be showing you how to use the Attributes Editor. The Attributes Editor module manages the properties of the Object currently selected in the Scene Viewer. These properties include Translation, Rotation, Scale, Shear, Bounding Box etc.

Basically, the Attributes Editor allows you to define the position, visibility, animation and mesh opacity of the currently selected Object, compute LODs, and edit dynamics, sensors, reflection, variables etc.

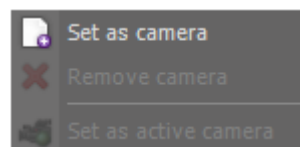


Attributes Menu

The Attributes menu allows the selection of the available Attributes, for the selected Object, via sub-menus:



Camera: This option will open the “Camera” sub-options menu:



Set as camera: This option will set the selected Object as a Camera. This will add the ‘Camera Attributes’ roll-up to the Object in the Attributes Editor.

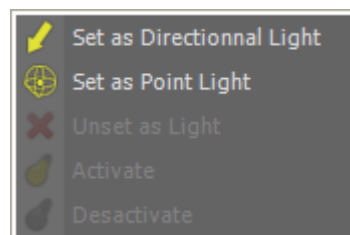
Remove camera: This option will delete the Camera from the selected Object.

NOTE: you will be asked if you want to proceed with the deletion.

NOTE: this will remove the ‘Camera Attributes’ roll-up from the Object in the Attributes Editor.

Set as active camera: This option will set the Camera of the selected Object to be the active Camera in the Scene.

Light: This option will open the “Light” sub-options menu:



Set as Directional Light: This option will set the selected Object as a directional Light.

NOTE: this will add the ‘Light Attributes’ roll-up to the Object in the Attributes Editor.

Set as Point Light: This option will set the selected Object as a point Light.

NOTE: this will add the ‘Light Attributes’ roll-up to the Object in the Attributes Editor.

Unset as Light: This option will delete the Light from the selected Object.

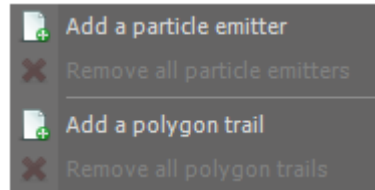
NOTE: you will be asked if you want to proceed with the deletion.

NOTE: this will remove the ‘Light Attributes’ roll-up from the Object in the Attributes Editor.

Activate: This option will turn on the Light attached to the selected Object.

Deactivate: This option will turn off the Light attached to the selected Object.

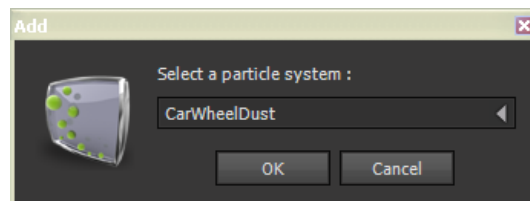
Sfx: This option will open the “Sfx” sub-options menu:



Add a particle emitter: This option will open the following dialog, which will allow the addition of a Particle System to the selected Object via selection from the drop-down list:

NOTE: the Particle System must have already been defined in the project.

NOTE: this will add the ‘Sfx Attributes’ roll-up to the Object in the Attributes Editor, if it is not already attached.



Remove all particle emitters: This option will delete the Particle System(s) from the selected Object.

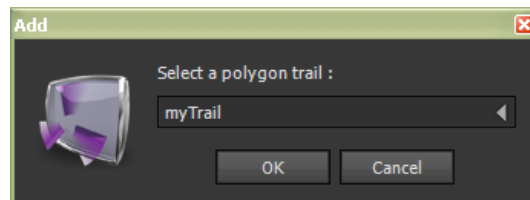
NOTE: you will be asked if you want to proceed with the deletion.

NOTE: this will remove the ‘Sfx Attributes’ roll-up from the Object in the Attributes Editor, as long as there is no ‘Polygon Trail’ also attached to the selected Object.

Add a polygon trail: This option will open the following dialog, which will allow the addition of a Polygon Trail to the selected Object via selection from the drop-down list:

NOTE: the Polygon Trail must have already been defined in the project.

NOTE: this will add the ‘Sfx Attributes’ roll-up to the Object in the Attributes Editor, if it is not already attached.

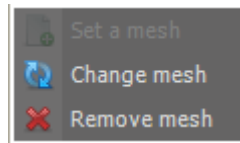


Remove all polygon trails: This option will delete the Polygon Trail(s) from the selected Object.

NOTE: you will be asked if you want to proceed with the deletion.

NOTE: this will remove the ‘Sfx Attributes’ roll-up from the Object in the Attributes Editor, as long as there is no ‘Particle System’ also attached to the selected Object.

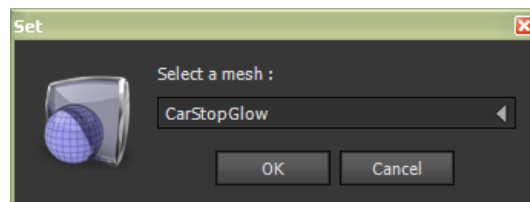
Shape: This option will open the “Mesh” sub-options menu:



Set a mesh: This option will open the following dialog, which will allow the setting of a Mesh to the selected object via selection from the drop-down list:

NOTE: the Mesh must have already been defined in the project.

NOTE: this will add the ‘Shape Attributes’ roll-up to the Object in the Attributes Editor.



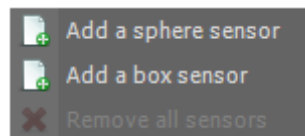
Change mesh: This option will open the same dialog as above, allowing the selection of a new Mesh to replace the existing one on the selected Object.

Remove mesh: This option will delete the Mesh from the selected Object.

NOTE: you will be asked if you want to proceed with the deletion.

NOTE: this will remove the ‘Shape Attributes’ roll-up from the Object in the Attributes Editor.

Sensor: This option will open the “Sensor” sub-options menu:



Add a sphere sensor: This option will add a Sphere-shaped Sensor to the selected Object.

NOTE: this will add the ‘Sensor Attributes’ roll-up to the Object in the Attributes Editor.

Add a box sensor: This option will add a Cube-shaped Sensor to the selected Object.

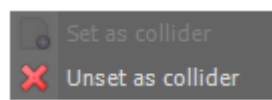
NOTE: this will add the ‘Sensor Attributes’ roll-up to the Object in the Attributes Editor.

Remove all sensors: This option will delete the Sensor(s) from the selected Object.

NOTE: you will be asked if you want to proceed with the deletion.

NOTE: this will remove the ‘Sensor Attributes’ roll-up from the Object in the Attributes Editor.

Collider: This option will open the “Collider” sub-options menu:

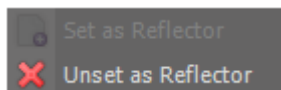


Set as collider: This option will add the Collider attribute to the selected Object.

Unset as collider: This option will delete the Collider attribute from the selected Object.

NOTE: you will be asked if you want to proceed with the deletion.

Reflector: This will open the “Reflector” sub-options menu:



Set as Reflector: This option will add the Reflector attribute to the selected Object.

NOTE: this will add the ‘Reflector Attributes’ roll-up to the Object in the Attributes Editor.

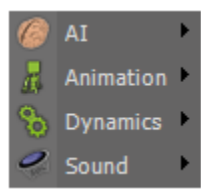
Unset as Reflector: This option will delete the Reflector attribute from the selected Object.

NOTE: you will be asked if you want to proceed with the deletion.

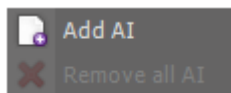
NOTE: this will remove the ‘Reflector Attributes’ roll-up from the Object in the Attributes Editor.

Controllers Menu

The Controllers menu allows the selection of the available Controllers, for the selected Object, via sub-menus:



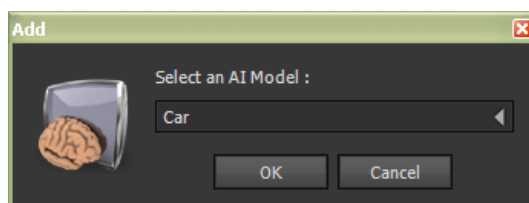
AI: This option will open the “AI” sub-options menu:



Add AI: This option will open the following dialog, which will allow the addition of an AIModel to the selected Object via selection from the drop-down list:

NOTE: the AIModel must have already been defined in the project.

NOTE: this will add the ‘AI Controller’ roll-up to the Object in the Attributes Editor.

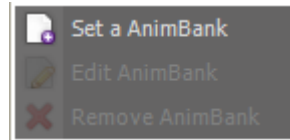


Remove all AI: This option will delete the AIModel(s) from the selected Object.

NOTE: you will be asked if you want to proceed with the deletion.

NOTE: this will remove the ‘AI Controllers’ roll-up from the Object in the Attributes Editor.

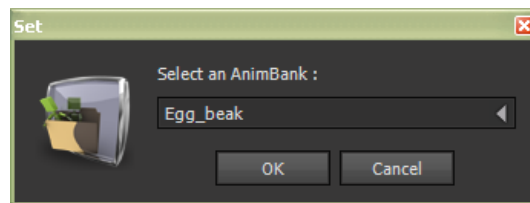
Animation: This option will open the “Animation” sub-options menu:



Set a AnimBank: This option will open the following dialog, which will allow the addition of an AnimBank to the selected Object via selection from the drop-down list:

NOTE: the AnimBank must have already been defined in the project.

NOTE: this will add the ‘Animation Controller’ roll-up to the Object in the Attributes Editor.



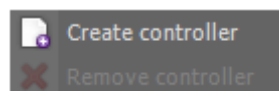
Edit AnimBank: This option will open the selected AnimBank in the AnimBank Editor.

Remove AnimBank: This option will delete the AnimBank from the selected Object.

NOTE: you will be asked if you want to proceed with the deletion.

NOTE: this will remove the ‘Animation Controller’ roll-up from the Object in the Attributes Editor.

Dynamics: This option will open the “Dynamics” sub-options menu:



Create controller: This option will add a Dynamics Controller to the selected Object.

NOTE: if the selected Object is already a ‘Collider’, it cannot have a ‘Dynamics Controller’.

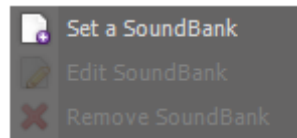
NOTE: this will add the ‘Dynamics Controller’ roll-up to the Object in the Attributes Editor.

Remove controller: This option will delete the Dynamics Controller from the selected Object.

NOTE: you will be asked if you want to proceed with the deletion.

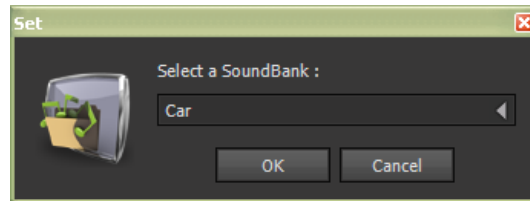
NOTE: this will remove the ‘Dynamics Controller’ roll-up from the Object in the Attributes Editor.

Sound: This option will open the “Sound” sub-options menu:



Set a SoundBank: This option will open the following dialog, which will allow the addition of a SoundBank to the selected Object via selection from the drop-down list:

NOTE: the SoundBank must have already been defined in the project.



Edit SoundBank: This option will open the selected SoundBank in the SoundBank Editor.

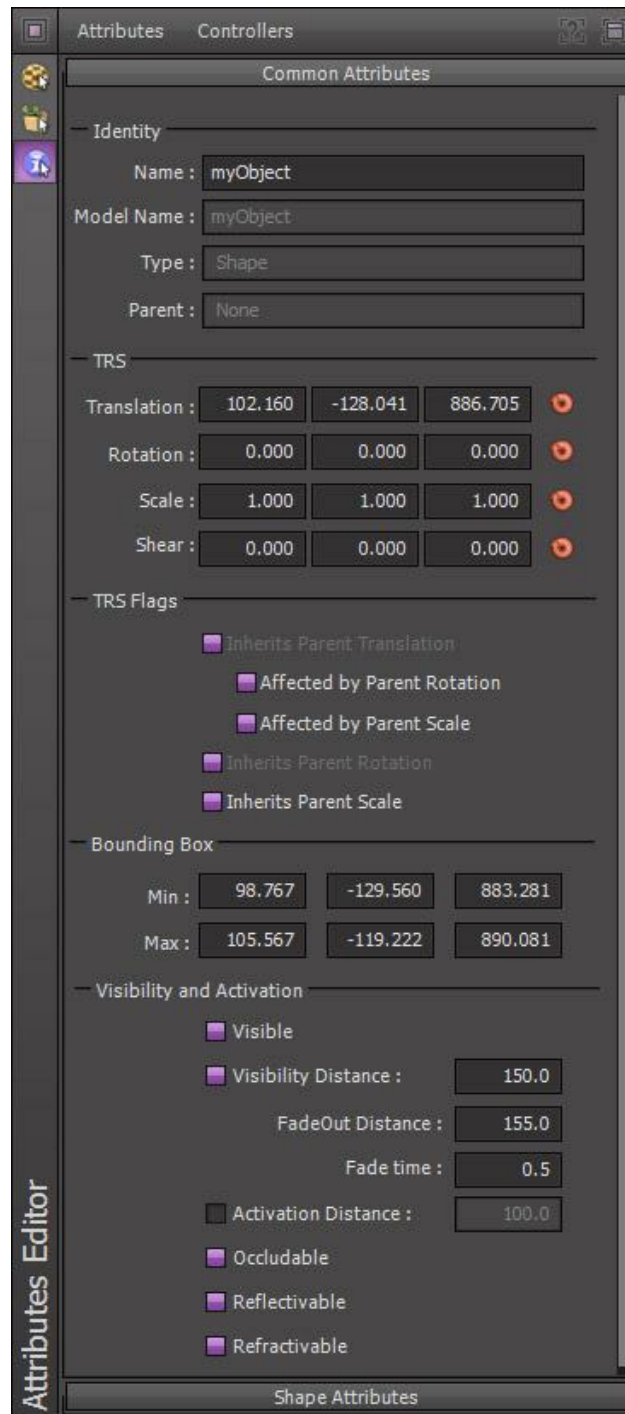
Remove SoundBank: This option will delete the SoundBank from the selected Object.

NOTE: you will be asked if you want to proceed with the deletion.

OK, so that takes care of the main menus of the Attributes Editor, now it's time to get stuck into all the 'roll-ups' that I have mentioned above. We'll start with the 'Common Attributes' roll-up, as this is 'Common' to all Objects.

Common Attributes

This roll-up allows the setting of the common attributes of the selected Object:



Identity: These options provide details of the selected Object:

Name: This option allows the setting of the name of the selected Object.

Model Name:

“a name”: This shows that the Object is an instance of the Model named here.

none: This shows that the Object is not linked to a Model.

Type:

Hybrid: This shows that the Object is composed of multiple types.

Other: This shows that the Object is one of the following:


Camera
Light
Group
Sfx
Shape
Sensor
Reflector
Collider

Parent:

“a name”: This shows the name of the Object’s parent.

none: This shows that the Object has no parent.

TRS: These options allow the setting of the Translation, Rotation, Scale and Shear of the Object in the X, Y & Z axes [all values allow approx. –infinity to infinity].

NOTE: the  buttons are used to reset the relevant transformation.

TRS Flags: These options allow the influencing of the transformations of the Object to be by the transformations of the parent (if any):

Inherits Parent Translation: This option, if checked, sets that the child's translation is to be the same as its parent.

Affected by Parent Rotation: This option, if checked, sets that the child's rotation is to be affected by the rotation of its parent.

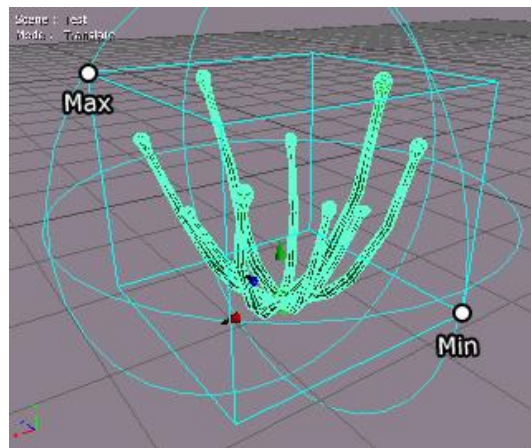
Affected by Parent Scale: This option, if checked, sets that the child's scale is to be affected by the scale of its parent.

Inherits Parent Rotation: This option, if checked, sets that the child's rotation is to be the same as its parent.

Inherits Parent Scale: This option, if checked, sets that the child's scale is to be the same as its parent.

Bounding Box: These options show the minimum and maximum X, Y & Z values for the coordinates of the Bounding Box of the Object.

Example Bounding Box (showing the minimum and maximum coordinate points of the Bounding Box):



Visibility and Activation: These options allow the setting of both the visibility and activation of the Object, and can be applied to multiple selected Objects:

Visible: This option, if checked, sets that the Object is to be visible.

NOTE: static Lights are not included in the lighting computations if they are not visible.

Visibility Distance: This option allows the setting of the distance from which the Object will be totally visible [0 to approx. infinity].

FadeOut Distance: This option allows the setting of the distance at which the Object will appear. It achieves this by increasing the opacity of the Object as it gets closer to the 'FadeOut Distance' [0 to approx. infinity].

Fade time: This option allows the setting of the delay time for the Opacity fade [0 to approx.infinity].

Activation Distance: If the Object contains an AI or a SFX, then this option allows the setting of the distance at which they will start. This distance is based on the distance between the Object and the Camera [0 to approx. infinity].

Occludable: This option, if checked, sets that the Object can be masked by an Occluder.

Reflectivable: This option, if checked, sets that the Object is to be included in the reflection RenderMap.

Refractivable: This option, if checked, sets that the Object is to be included in the refraction RenderMap.

Camera Attributes



FOV: This slider allows the setting of the Field Of View of the Camera [5 to 80 degrees].

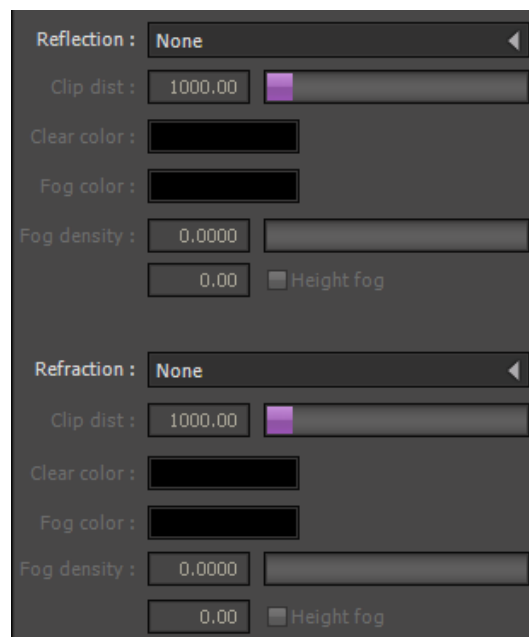
NOTE: the Field Of View is the number of degrees of the world that are visible from the Camera. The point immediately in front of the Camera is the middle point of the Field Of View.

Clip dist: This slider allows the setting of the clipping distance of the Camera [10 to 10000].

NOTE: the clipping distance is the distance at which no further rendering will occur.

Output: This option allows the setting, via a drop-down list, of the destination of the Render. “Framebuffer” means that the Render will occur in the viewport ie: the Screen. You can also choose to store the output of the Camera in a RenderMap. RenderMaps work in the same way as Textures.

Reflector attributes



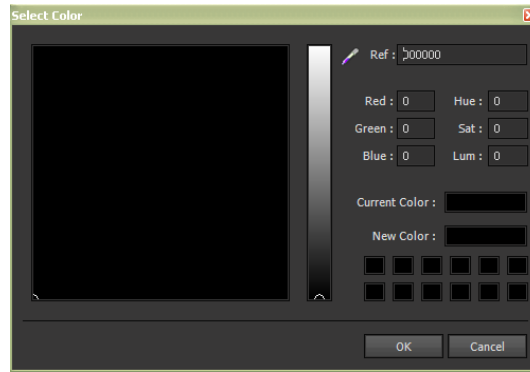
Reflection: This option allows the selection of the RenderMap, from a drop-down list of all available RenderMaps, in which the rendered reflection will be stored.

NOTE: the RenderMap must have already been created.

Clip dist: This slider allows the setting of the clipping distance of the Reflector [10 to 1000].

Clear color: This option will open the following dialog (“Colour Dialog”), which allows the setting of the background colour for the Reflection:

NOTE: this dialog will be explained in more detail at the end of this section.



Fog color: This option will open the “Colour Dialog”, which allows the setting of the colour of the fog.

Fog density: This slider allows the setting of the density of the fog [0 to 1].

Height fog: This option will set the middle of the fog based on the Y axis ie: the fog would appear to start above the level specified here.

Refraction: This option allows the selection of the RenderMap, via a drop-down list of all available RenderMaps, in which the rendered refraction will be stored.

NOTE: the RenderMap must have already been created.

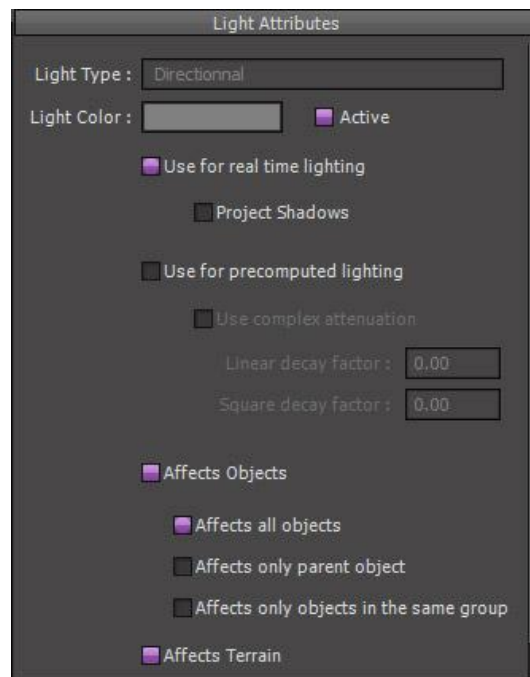
Clip dist: This slider allows the setting of the clipping distance of the refractor [10 to 1000].

Clear color: This option will open the “Colour Dialog”, which allows the setting of the background colour for the refraction:

Fog color: This option will open the “Colour Dialog”, which allows the setting of the colour of the fog.

Fog density: This slider allows the setting of the density of the fog [0 to 1].

Height fog: This option will set the middle of the fog based on the Y axis ie: the fog would appear to start above the level specified here.

Light attributes

Light Type: This displays the type of the Light:

Point (omni-directional)

Directional

Light Color: This option opens the “Colour Dialog”, which allows the setting of the colour of the Light.

Active: This option, if checked, sets that the Light is active.

NOTE: an inactive Light will not be used for dynamic or static render.

Use for real time lighting: This option, if checked, sets that the Light will be used as dynamic lighting.

Project Shadows: This option, if checked, sets that the Light will project real time Shadows.

NOTE: currently, Point Lights don't project Shadows.

Use for pre computed lighting: This option, if checked, sets that the Light will be used for pre computed lighting.

Use complex attenuation: This option, if checked, sets that a more complex mathematical process will be used for computing attenuation.

Linear decay factor: This option allows the setting of the linear division of the attenuation distance [0 to 99].

Square decay factor: This option allows the setting of the exponential division of the attenuation distance [0 to 99].

Affects objects: This option, if checked, sets that the Light will affect Objects according to the following selections:

Affects all objects: This option, if checked, sets that the Light will affect all of the Objects in the Scene.

Affects only parent object: This option, if checked, sets that the Light will only affect its parent Object.

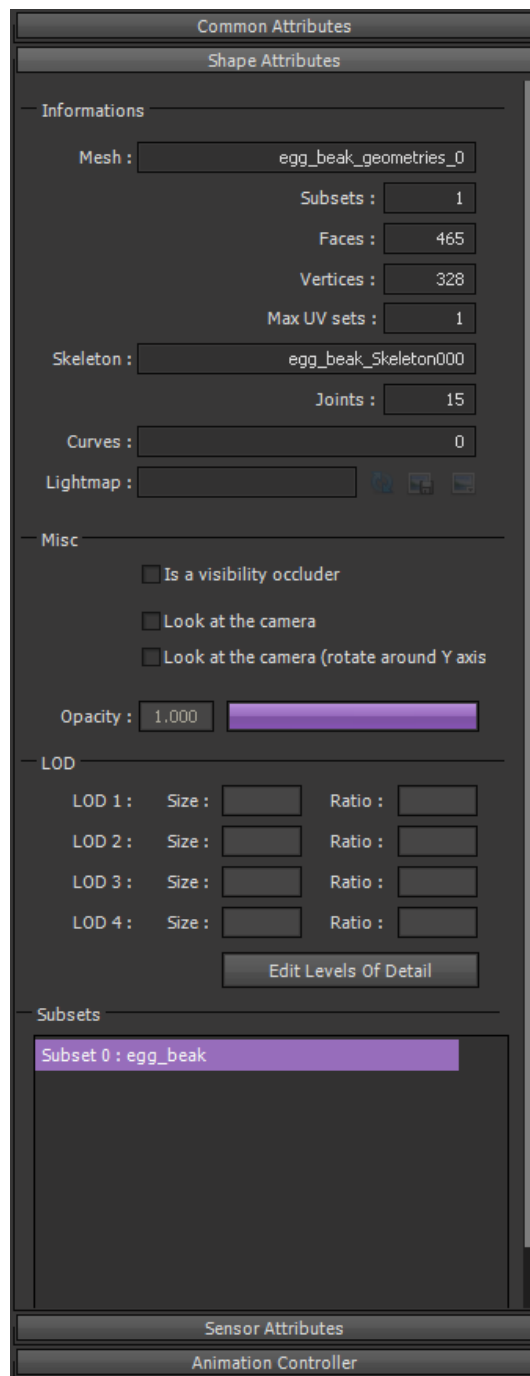
NOTE: this assumes that the Light is in a group.

Affects only objects in the same group: This option, if checked, sets that the Light will only affect those Objects that are in the same group as the Light.

NOTE: this assumes that the Light is in a group.

Affects Terrain: This option, if checked, sets that the Light will affect Terrain Chunks.

Shape attributes



Informations: These options detail miscellaneous information about the Shape:

Mesh: This option shows the name of the Mesh (.msh resource).

Subsets: This option shows the count of the subsets in the Mesh.

NOTE: this is the same as the material id in 3dsMax.

Faces: This option shows the number of faces (triangles) in the Mesh.

Vertices: This option shows the number of vertices in the Mesh.

Max UV sets: This option shows the maximum number of UV Sets in the Mesh.

Skeleton: This option shows the name of the Skeleton associated with the Mesh (.ske resource).

Joints: This option shows the number of bones in the Skeleton.

Curves: This option shows the number of curves in the Mesh.

NOTE: in Script, there is the option to add additional Splines (shape.addcurve).

Lightmap: This option shows the size of the LightMap associated with the Mesh. The options associated with this are:

Transfer UV: This option, if set to “Automatic”, will unwrap the uv for the computation of the LightMap. If this is set to “Custom”, ShiVa will use the UV2 of the Mesh to compute the LightMap at the selected resolution.

Save: this option will allow the saving of the LightMap.

Load: this option will allow the loading of a LightMap that is available in the current project.

Misc: These options allow certain miscellaneous options to be set for the Mesh:

Is a visibility occluder: This option, if checked, sets that Objects hidden by this Sshape will not be computed.

NOTE: this should be used on large Meshes such as buildings, walls, doors etc.

Look at the camera: This option, if checked, sets that the Object will always look at the Camera eg: a billboard.

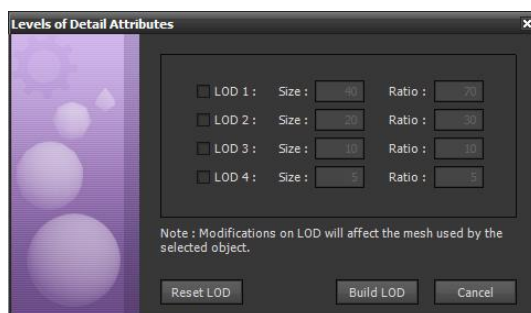
Look at the camera (rotate around Y axis): This option, if checked, sets that the Object will always look at the Camera, but only using movements on the Y axis.

Opacity: This slider allows the setting of the Opacity of the Mesh [0 to 1].

LOD: These options show the sizes and ratios for automatic level of detail generation:

NOTE: Advanced Version only.

Edit Levels of Detail: This button opens the following dialog, to enable the setting of the sizes and ratios for the LODs:



Reset LOD: This button will reset the LODs.

Build LOD: This button will build the LODs based on the input values.

Warning: Creation of LOD(s) directly affects the Mesh resource, not only the selected instance of the Mesh.

LOD computation applies to the global aspects of the Mesh. That is why, in the case of a simple Mesh, LOD cannot simplify the Mesh any more than it already is.

Example:

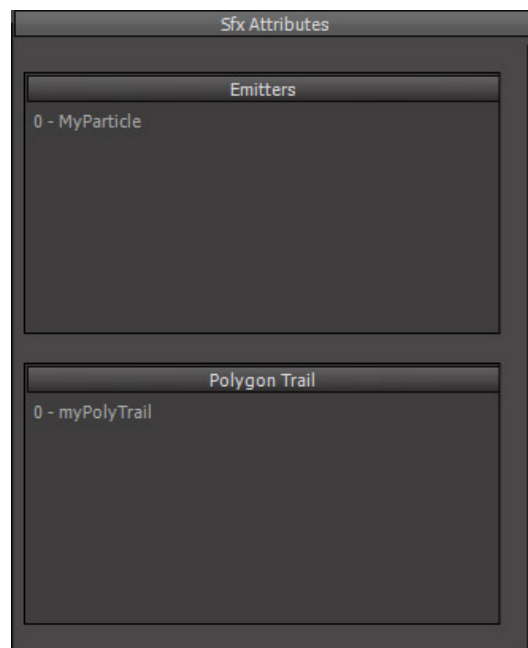
LOD 1: at 40% of the screen size, the Mesh comprises 70% of its original number of polygons, if such a simplification is possible.

LOD 2: at 20% of the screen size, the Mesh comprises 30% of its original number of polygons, if such a simplification is possible etc.

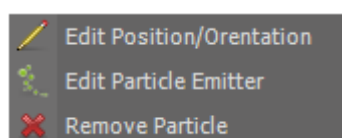
Subsets: This option lists the subsets of the Mesh.

NOTE: this list allows you to attach a Material to one or more subsets by direct drag'n'drop of the Material onto the selected subset.

Sfx attributes

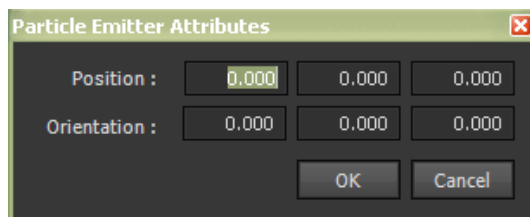


Emitters: This option lists the Particle Emitters attached to the selected Object. Right clicking on an Emitter in the list opens the following dialog:



Edit Position/Orientation: This option opens the following dialog, allowing the setting of the position and the orientation of the selected Particle Emitter in the X, Y & Z axes [approx. -infinity to infinity].

NOTE: by default, the particle emission starts at [0, 0, 0] (the pivot of the Object).

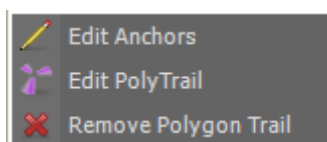


Edit particle Emitter: This option opens the selected Particle Emitter in the Particle Editor.

Remove Particle: This option removes the Particle Emitter from the Object.

NOTE: you will be asked if you want to proceed with the deletion.

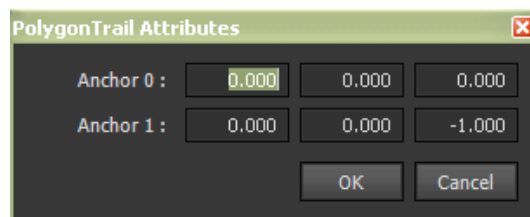
Polygon Trail: This option lists the Polygon Trails attached to the selected Object. Right clicking on a trail in the list opens the following dialog:



Edit Anchors: This option opens the following dialog, allowing the setting of the position of the two anchors of the selected Polygon Trail in the X, Y & Z axes [approx. -infinity to infinity]:

NOTE: by default the trail anchors are at [0, 0, 0] (the pivot of the Object).

NOTE: anchors 0 and 1 are the coordinates of the segment points used to generate the trail polygons.



Edit PolyTrail: This option opens the selected Polygon Trail in the PolyTrail Editor.

Remove Polygon Trail: This option removes the Polygon Trail from the Object.

NOTE: you will be asked if you want to proceed with the deletion.

Sensor attributes

The screenshot shows a software interface for configuring a sensor. The 'Sensor Attributes' tab is selected, displaying a 'Sensor 0' configuration area. The 'Parameters' section includes an 'ID' field set to 0, a 'Type' dropdown set to 'Collision', and a 'Shape' dropdown set to 'Box'. Below these are input fields for 'Offset' and 'Size' along the X, Y, and Z axes. The 'Offset' values are 0.000, 0.412, and -0.028. The 'Size' values are 0.602, 0.826, and 0.551. At the bottom of the panel are tabs for 'AI Controller' and 'Animation Controller'.

ID: This option allows the setting of the ID of the Sensor [0 to 255].

NOTE: in script, the onSensorCollision Handler provides this ID.

NOTE: you can define different behaviours depending on the hit Sensor ID, and multiple Sensors can have the same ID.

Type: This option allows the setting of the type of the Sensor. Currently, only “Collision” is available.

Shape: This option allows the setting of the Shape of the Sensor via a drop-down list containing the following values:

NOTE: by changing the value in the drop-down, the size input boxes change, as described below.

Box: This option allows the setting of the offset and size of the box-shaped Sensor:

Offset: The offset of the Sensor from the Object, in the X, Y and Z axes [approx. – infinity to infinity].

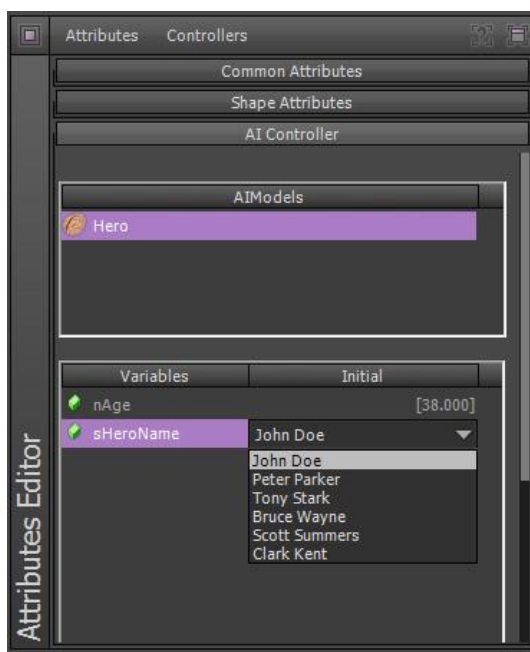
Size: These options allow the setting of the size of the Sensor, in the X, Y and Z axes [0.001 to approx. infinity].

Sphere: This option allows the setting of the offset, and radius of the sphere-shaped Sensor.

Offset: The offset of the Sensor from the Object, in the X, Y and Z axes [approx. – infinity to infinity].

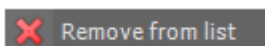
Size: This option allows the setting of the size of the Sensor, as a radius only [0.001 to approx. infinity].

AI controller



AIModels: This option lists all of the AIModels attached to the selected Object. Right clicking on an item in this list opens the following dialog, which allows the deletion of the AIModel from the list:

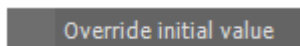
NOTE: you will be asked if you want to proceed with the deletion.



Variables: This option lists all of the Variables that have been defined on the selected AIModel. This list allows the overriding of the initial value of the selected Variable. Right clicking on the variable opens the following dialog:

NOTE: AI developers can customise the way the overriding of these Variables is presented.

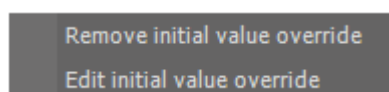
NOTE: double clicking on an overridable Variable will open the “Initial” field for editing.



Override initial value: This option opens the “Initial” field of the selected Variable for editing.

NOTE: if the Variable has been set so that it cannot be overridden, then a message dialog will display advising that the value cannot be overridden.

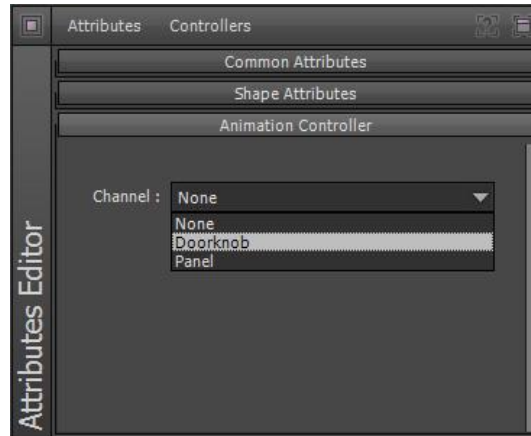
NOTE: if the initial value has already been overridden, the above dialog will display as follows:



Remove initial value override: This option will change the value of the “Initial” field back to the original initial value.

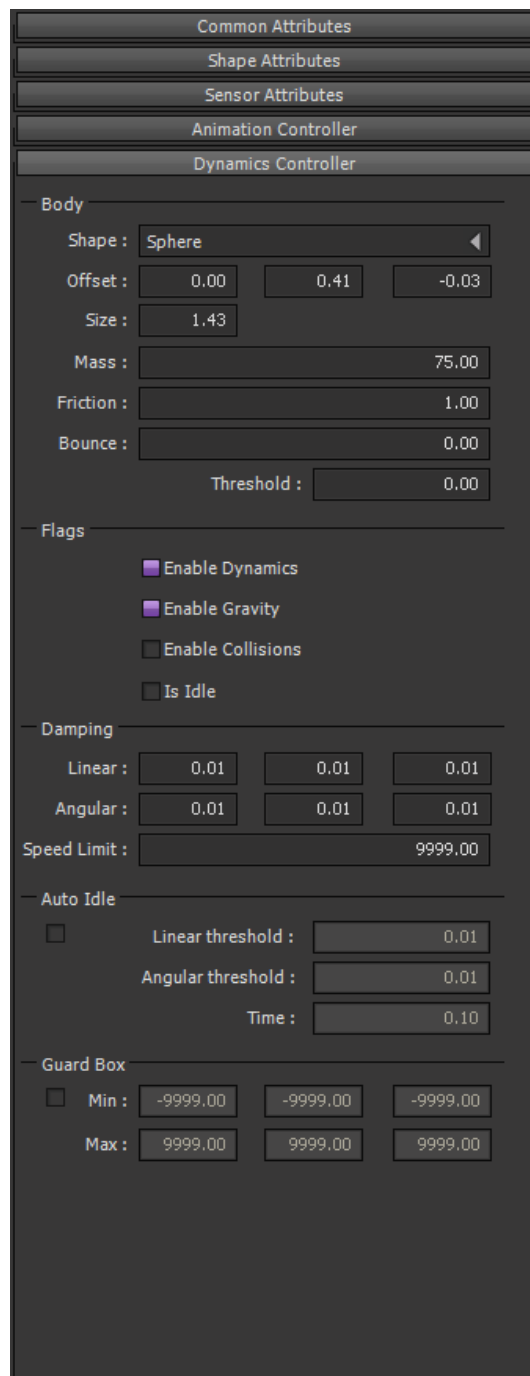
Edit initial value override: This option will open the “Initial” field for editing.

Animation controller



Channel: This option displays the currently selected animation channel. The value of this can be changed by selecting a different channel from the drop-down box, which contains a list of all available channels.

NOTE: for Objects containing a Skeleton, 'None' must be selected as the animation itself controls the nodes of the Skeleton.

Dynamics controller


Common Attributes

Shape Attributes

Sensor Attributes

Animation Controller

Dynamics Controller

Body

Shape : Sphere

Offset : 0.00 0.41 -0.03

Size : 1.43

Mass : 75.00

Friction : 1.00

Bounce : 0.00

Threshold : 0.00

Flags

☒ Enable Dynamics

☒ Enable Gravity

☐ Enable Collisions

☐ Is Idle

Damping

Linear : 0.01 0.01 0.01

Angular : 0.01 0.01 0.01

Speed Limit : 9999.00

Auto Idle

☐ Linear threshold : 0.01

Angular threshold : 0.01

Time : 0.10

Guard Box

☐ Min : -9999.00 -9999.00 -9999.00

Max : 9999.00 9999.00 9999.00

Body: These options allow changes to be made to the characteristics of the dynamic body attached to the selected Object:

Shape: This option allows the setting of the Shape that encompasses the dynamics object, and can be one of the following:

NOTE: changing this value will also change the options available in the “Size” fields.

Box

Sphere

Offset: These options allow the setting of the offset of the Shape encompassing the dynamics object, in the X, Y and Z axes [-100 to 100].

Size: These options allow the setting of the size of the Shape encompassing the dynamics object, in the X, Y and Z axes [0.01 to 9999]

NOTE: there is only one option available if the “Type” is “Sphere”, as this relates to the radius of the Shape.

Mass: This option allows the setting of the mass of the Object, and hence how it will interact with other objects [0.01 to 9999].

NOTE: mass values have to be realistic, and in kilograms.

Friction: This option allows the setting of how smoothly the Object’s movement will be, relative to the surface that it is in contact with [0 to 9999].

NOTE: a value between 0 and 1 will produce realistic results.

Bounce: This option allows the setting of how much the Object will bounce after a Collision [0 to 9999].

NOTE: a value between 0 and 1 will produce realistic results.

Threshold: This option allows the setting of the maximum threshold of the bounce [0 to 9999].

NOTE: a value greater than 1 should be used for this option.

Flags:

Enable Dynamics: This option, if checked, sets that the Object should be taken into account in the dynamics computation system.

Enable Gravity: This option, if checked, sets that the Object will be subject to the force of gravity.

Enable Collisions: This option, if checked, sets that the Object will Collide with other Objects.

NOTE: if not checked then other Objects will pass right through the selected Object.

Is Idle: This option, if checked, sets that the Object will start in an idle state.

NOTE: this can be very useful for items like bricks in a wall for example.

Damping:

Damping is used to simulate surrounding forces acting on the Object, like viscosity or air resistance, and is proportional to the Object’s velocity.

Linear: This option allows the setting of the linear (translation) damping values in the X, Y and Z axes [0 to 9999].

Angular: This option allows the setting of the angular (rotation) damping values in the X, Y and Z axes [0 to 9999].

Speed limit: This option allows the setting of the maximum speed for the linear velocity of the Object, in meters per second [0 to 9999].

Auto Idle

These options allow the setting of the disabling of the dynamics based on time and/or speed:

NOTE: these options are only enabled if the check-box is checked.

Linear Threshold: This option allows the setting of the linear threshold for auto idling [0 to 1].

Angular Threshold: This option allows the setting of the angular threshold for auto idling [0 to 1].

Time: This option allows the setting of the Time value for auto idling [0.10 – 10].

Guard Box

These options define a box in the 3D space, out of which the Object will never be able to pass:

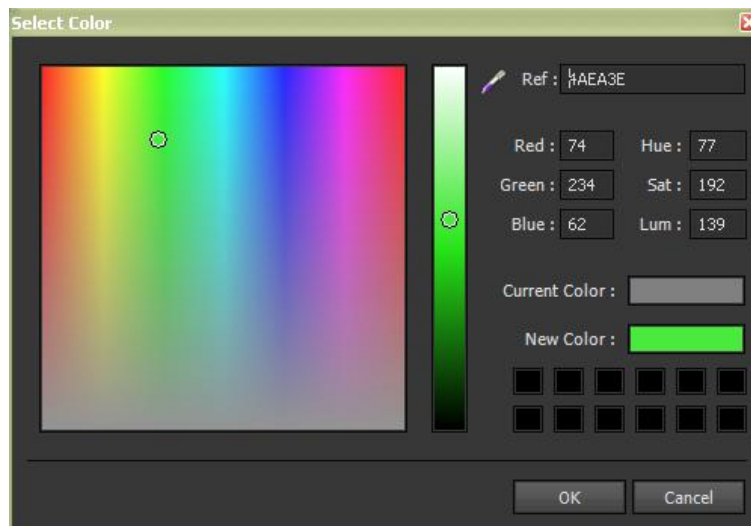
NOTE: these options are only enabled if the check-box is checked.

Min: These options allow the setting of the minimum coordinates of the guard box in the X, Y and Z axes [-9999 to 9999].

Max: These options allow the setting of the maximum coordinates of the guard box in the X, Y and Z axes [-9999 to 9999].

Colour Dialog

Now, as promised earlier, I'll explain the use of the ShiVa Colour Dialog. Whilst this is not strictly part of this Chapter, I thought that it would be a good idea to give a brief explanation at this point.



Basically, this dialog sets the colour to be returned when the 'OK' button is clicked, and is used to generate colours in several different areas in ShiVa.

There are several options available for selecting the colour:

- 1) Click in the large window to the left of the dialog to select the colour.
- 2) Type the hexadecimal value of the colour in the 'Ref.' field.

- 3) Type the 'Red:', 'Green:' and 'Blue:' values of the colour into the respective fields.
- 4) Pick a previously saved colour from one of the boxes at the bottom right of the dialog.

NOTE: any of the above methods will populate each of the others.

To change the brightness of the colour, the slider bar in the middle of the dialog can be used, with brighter colours towards the top of the slider. Or, you can change the value in the 'Lum:' field (the higher the value, the brighter the colour).

The 'Hue:' and 'Saturation:' of the colour can also be changed by typing values into the respective fields.

Both the currently selected colour and the new colour will be displayed in the 'Current Color:' and 'New Color:' fields respectively, and the current colour can be picked by clicking in the 'Current Color:' field.

Finally, preferred colours (such as internet colours) can be saved to the 12 boxes at the bottom right of the dialog. This can be achieved by dragging the colour from either the 'Current Color:' or 'New Color:' fields into any one of the 12 boxes.

Well, that's it for this Chapter. Next, I'll be giving you a guided tour of the Ambience Editor.