

VRayUserScalar

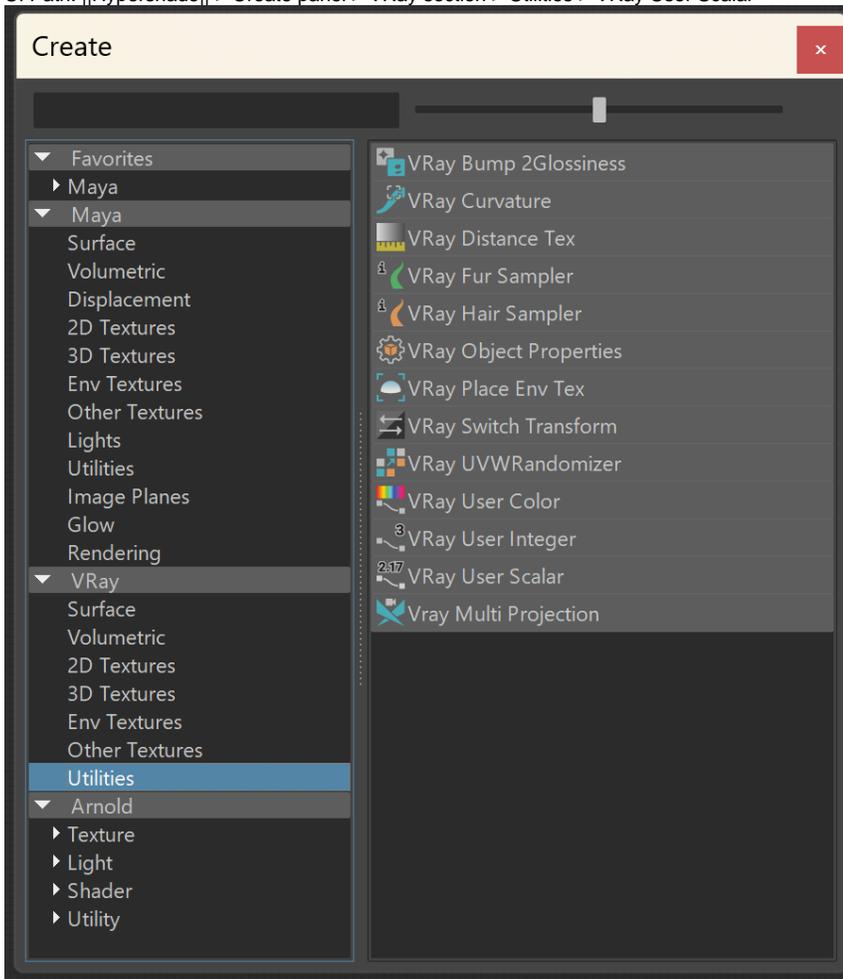
This page provides information on the V-Ray User-defined Scalar Map.

Overview

The VRayUserScalar texture allows the user to read and return a single number value from the User-Defined properties of the currently shaded object as a result. This can be useful if the same material or texture is applied to several objects in the scene, but we want to control some of its aspects (i.e. material glossiness, or a blend between two other textures inside a Mix texture etc) with User-Defined properties.

The Example on the right uses a VRayUserScalar node to control the reflection glossiness value on a single V-Ray Material. The four different pieces of the shader ball have a **VRayUserAttribute** that dictates different values that drive the reflection glossiness.

UI Path: ||Hypershade|| > Create panel > VRay section > Utilities > VRay User Scalar



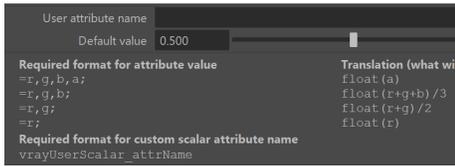


Parameters

User attribute name – Specifies the name of the user attribute that is looked up and returned from this shading node.

Default value – Specifies the value to return if the user attribute is not found on the shaded object.

Required format for attribute name – Displays possible formats for the attribute in the V-Ray User Attributes string assigned to the object, and what is rendered as a result.



Examples

In the examples below, user attributes are assigned to different objects with different values. A V-RayUserScalar texture reads the values and passes them to a shader at render time. This way we can pass different shader values that are controlled at the object level, allowing us to share the shader between all objects.

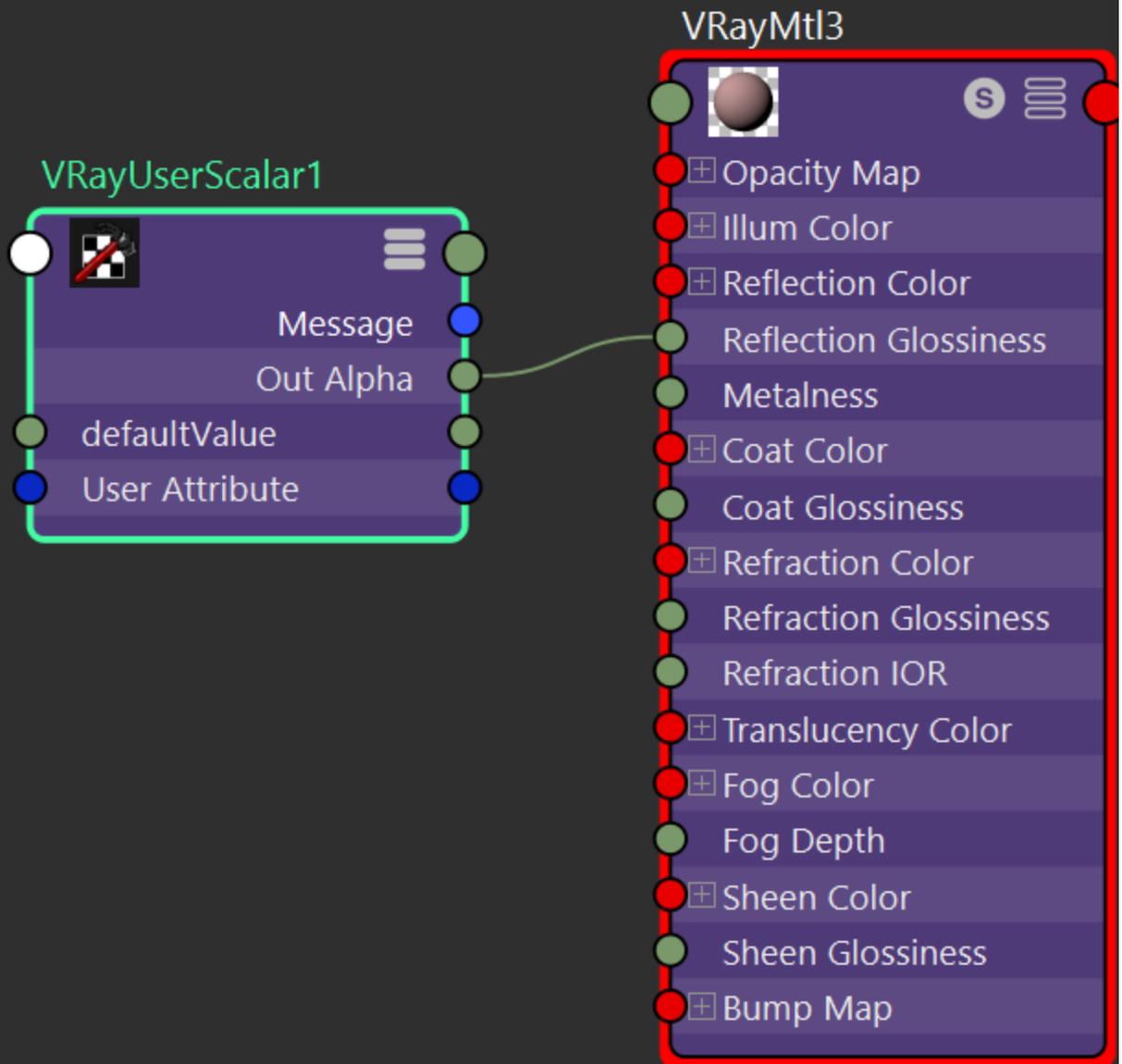
With the help of a user attribute we can control any scalar (float) parameter of the shader.

Note that Alembics coming from other applications, e.g. Houdini, with custom attributes already baked in, can be read in the same way as the user attributes. See the [Houdini to Maya Alembic Workflow tutorial](#) for more information.

User attributes can be added through the Attributes > V-Ray > [User attributes](#) menu.

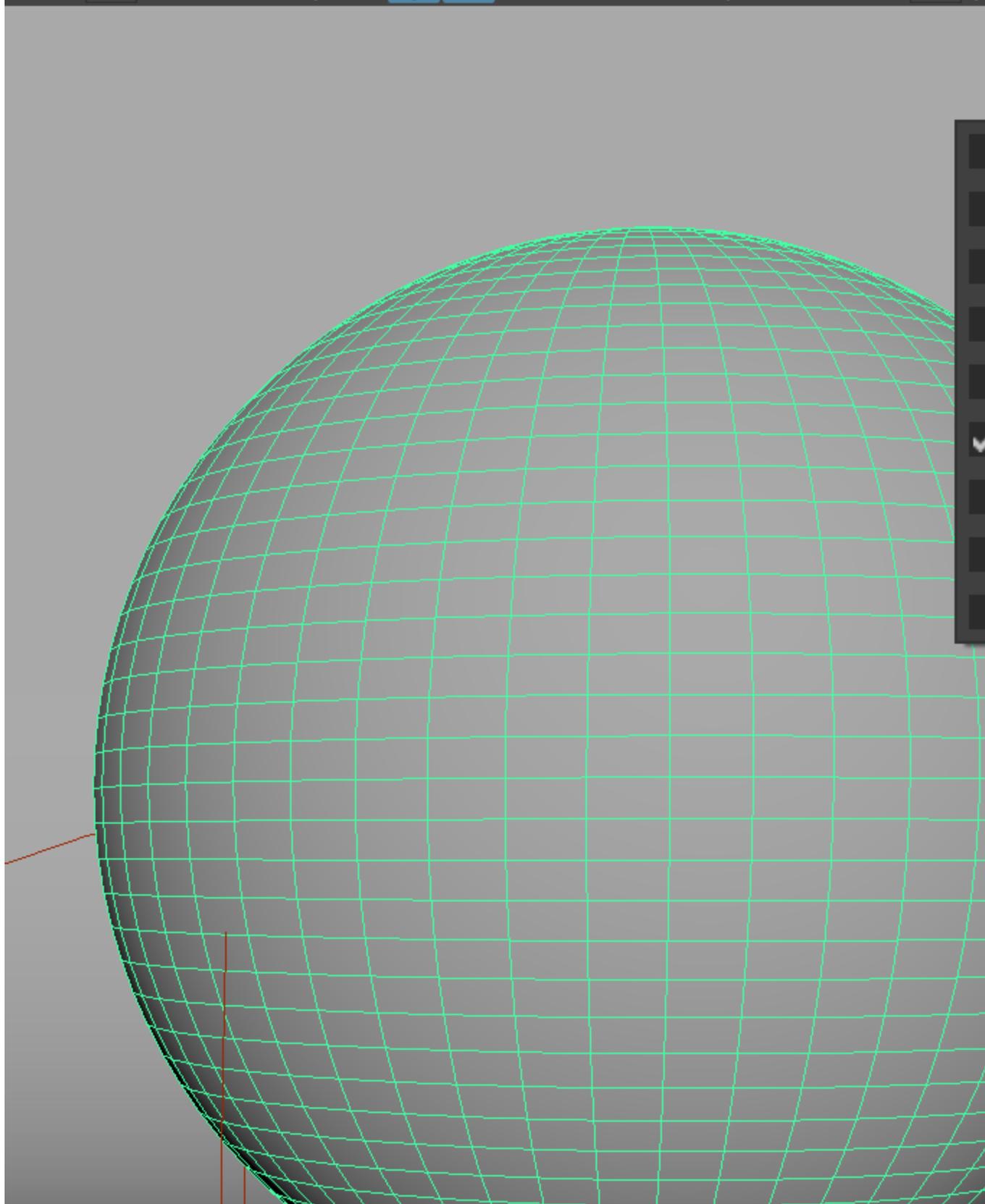
Example: User Properties

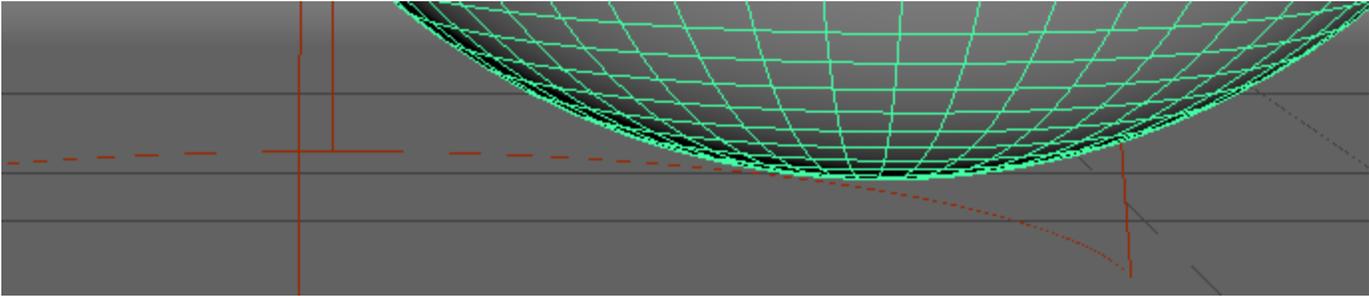
This example shows the format for the value of the user attribute and how it is interpreted. The V-RayUserScalar texture controls the V-RayMtl Reflection Glossiness parameter. A user attribute named reflectionGlossiness is used to specify different reflection glossiness values on two objects.



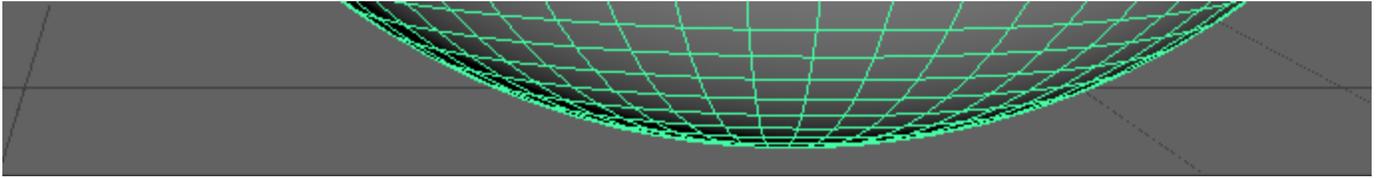
The same material is applied to both objects. A VRayUserScalar texture passes the values to the shader.

Panels

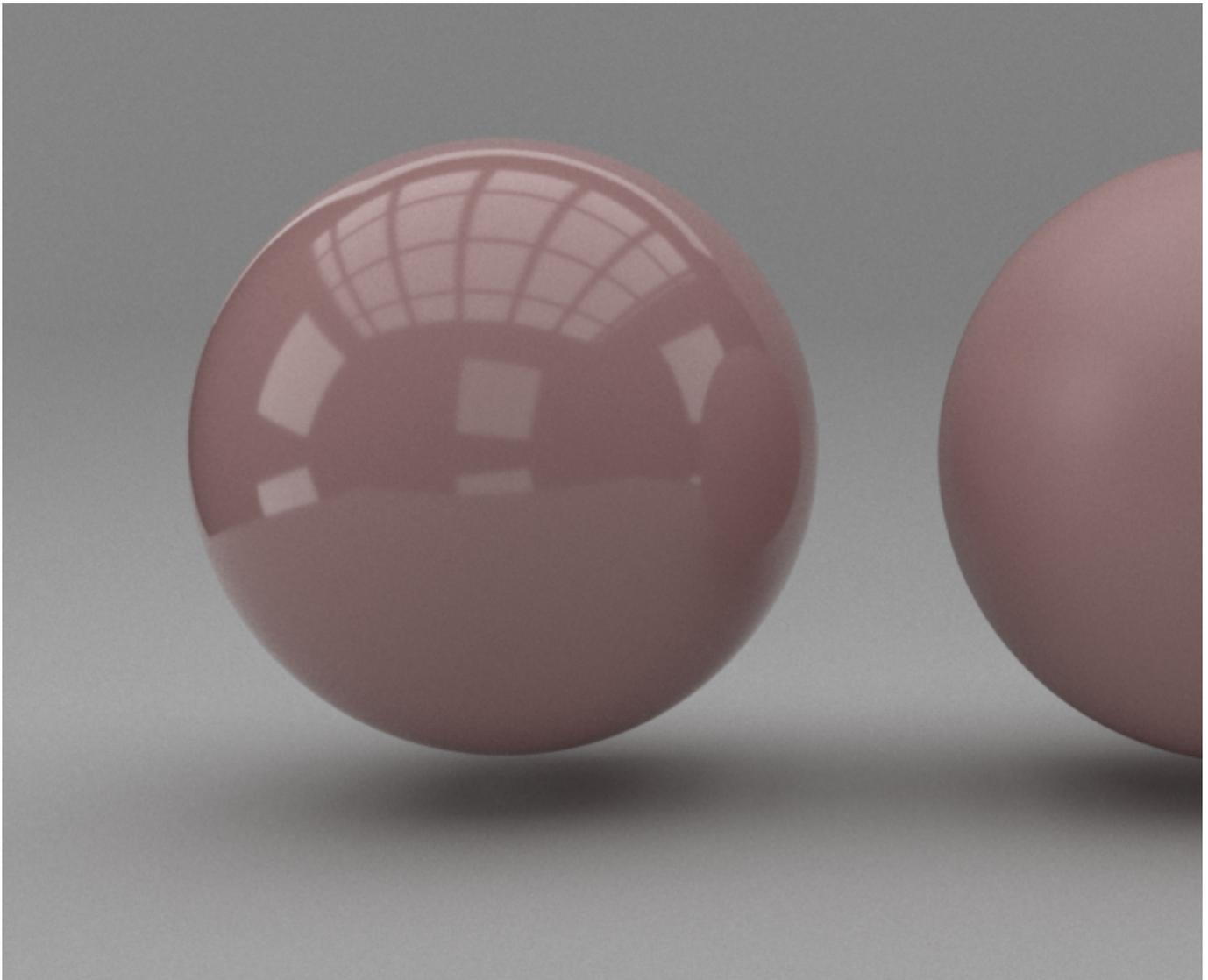




User attribute for the first object



User attribute for the second object



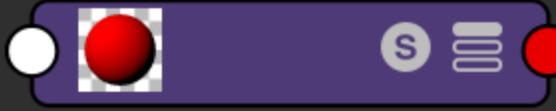
Although the two objects have the same material, the glossiness is determined by the user property.

Example: VRayUserScalar with VRaySwitchMtl

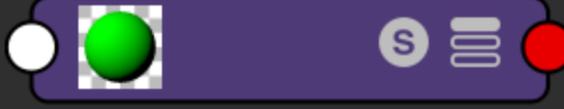
This example uses VRayUserScalar to control how materials from a VRaySwitchMtl are distributed to different objects.

Two different VRayMtls are linked as Material 0 and Material 1 in a VRaySwitchMaterial. A VrayUserScalar is used as the SwitchMtl's Material Switch and a user attribute named outputMaterial drives the material distribution.

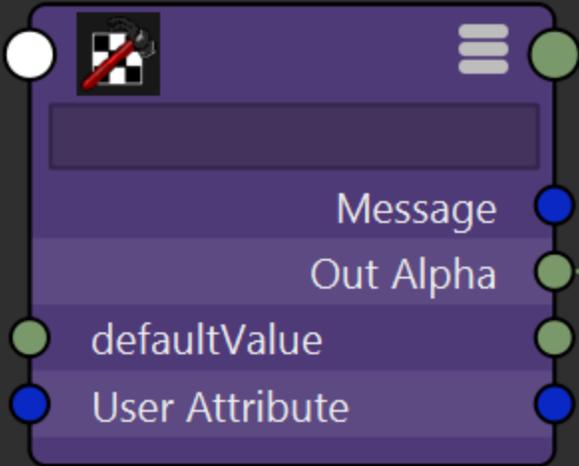
Red

A purple rectangular node with a white circle on the left, a red sphere in a square preview window, an 'S' icon, and a menu icon. A red dot on the right side is connected to a red line.

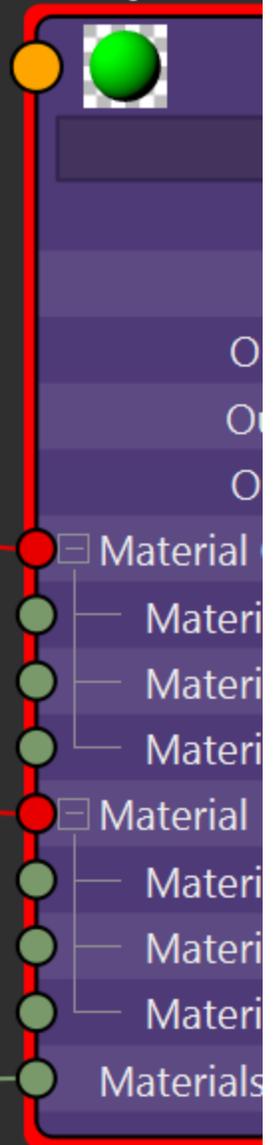
Green

A purple rectangular node with a white circle on the left, a green sphere in a square preview window, an 'S' icon, and a menu icon. A red dot on the right side is connected to a red line.

VRayUserScalar2

A purple rectangular node with a white circle on the left, a checkerboard icon, and a menu icon. It has several ports on the right: a green circle, a blue circle labeled 'Message', a green circle labeled 'Out Alpha', a green circle labeled 'defaultValue', and a blue circle labeled 'User Attribute'.

VRaySwitch

A purple rectangular node with a yellow circle on the left, a green sphere in a square preview window, and a red border. It has a vertical column of ports on the right: a yellow circle, a red circle, and several green circles. The red circle is connected to a red line from the 'Red' node, and another red circle is connected to a red line from the 'Green' node. A green circle is connected to a green line from the 'VRayUserScalar2' node.

The same VRaySwitchMtl is assigned to two spheres and the VRayUserScalar texture determines how Material 0 and 1 are distributed between the spheres.

View

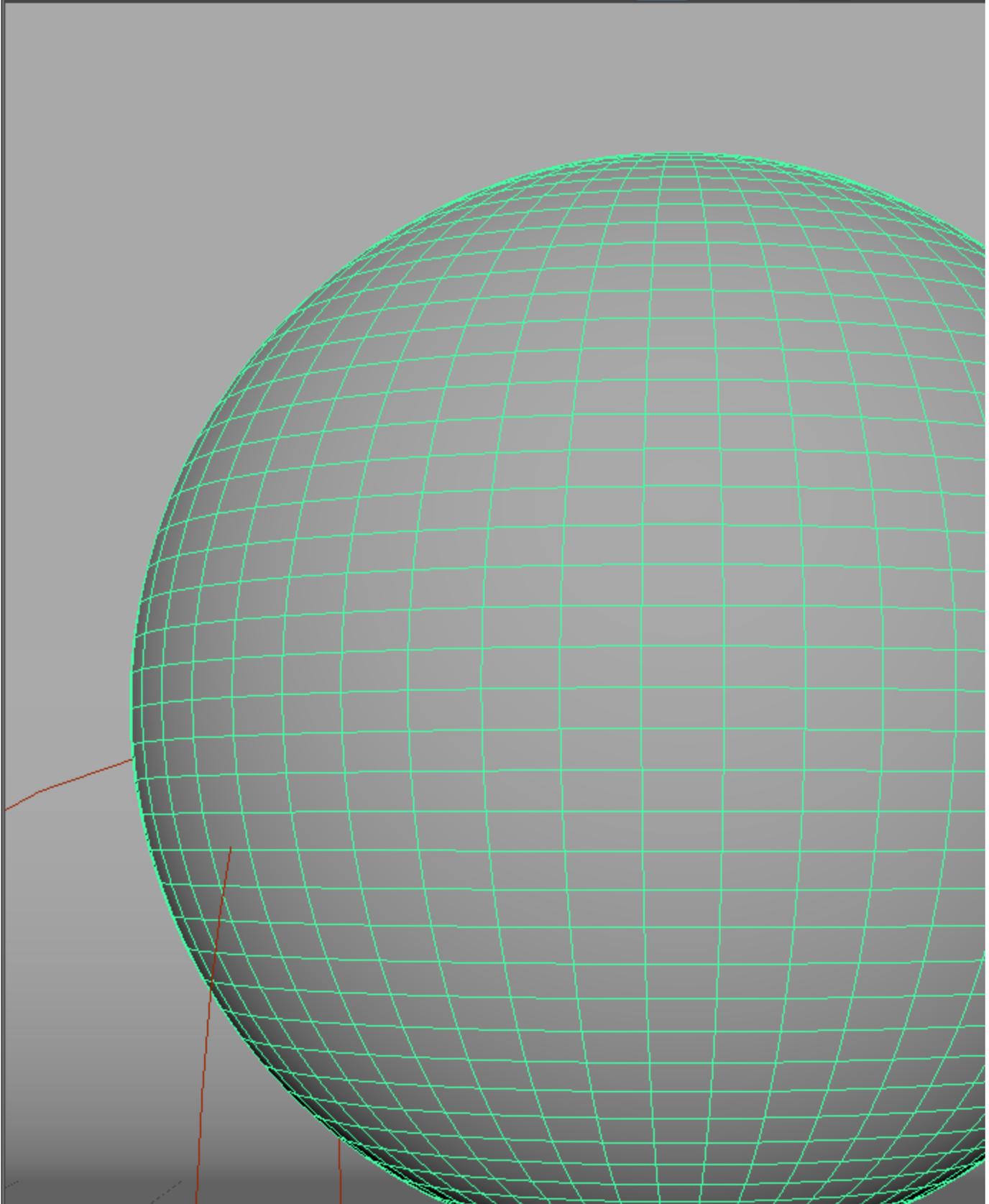
Shading

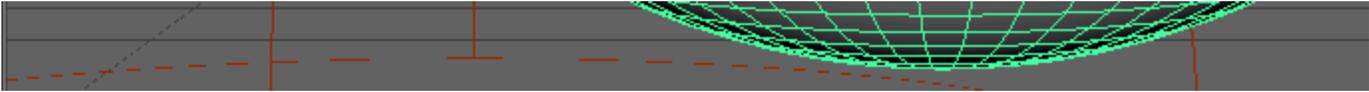
Lighting

Show

Renderer

Panels





User attribute for the first object

View

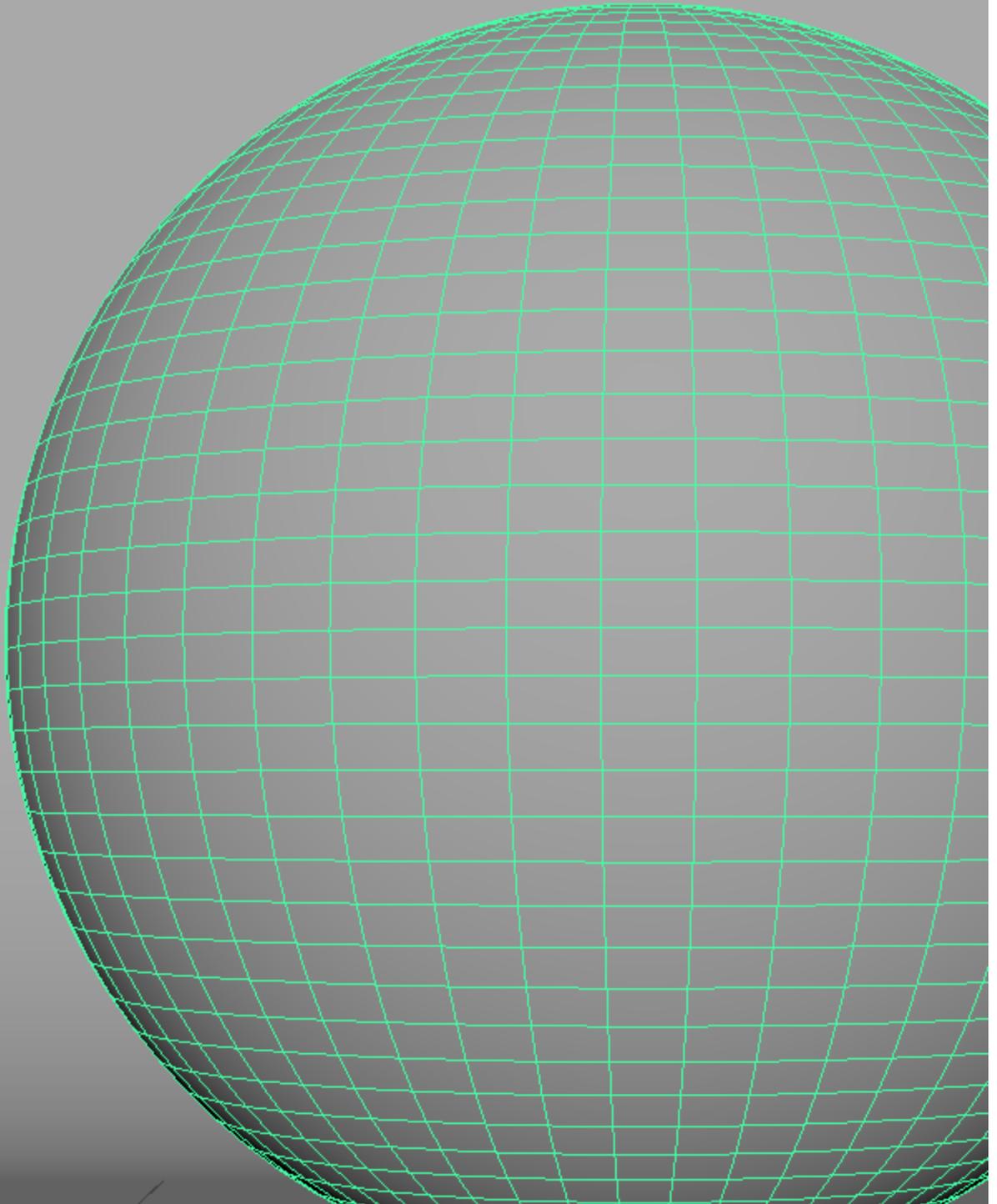
Shading

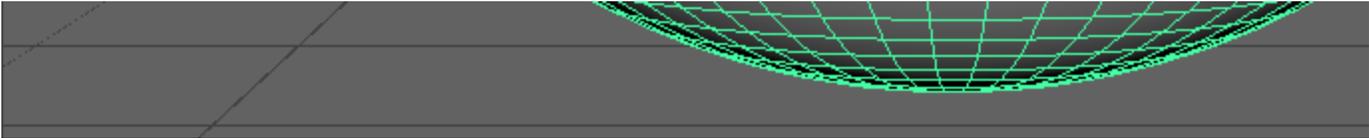
Lighting

Show

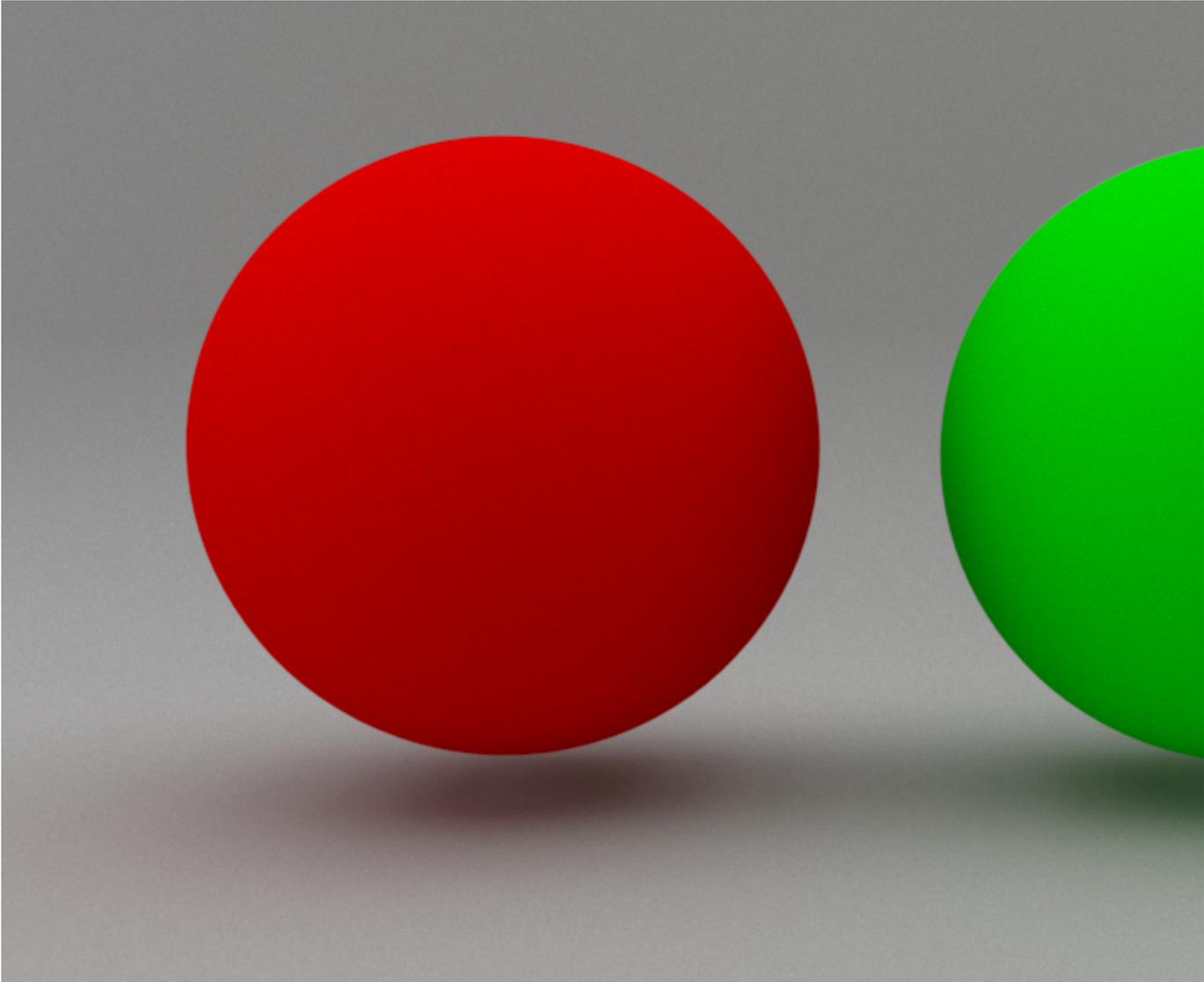
Renderer

Panels





User attribute for the second object



The left sphere receives Material 0 and the right sphere receives Material 1