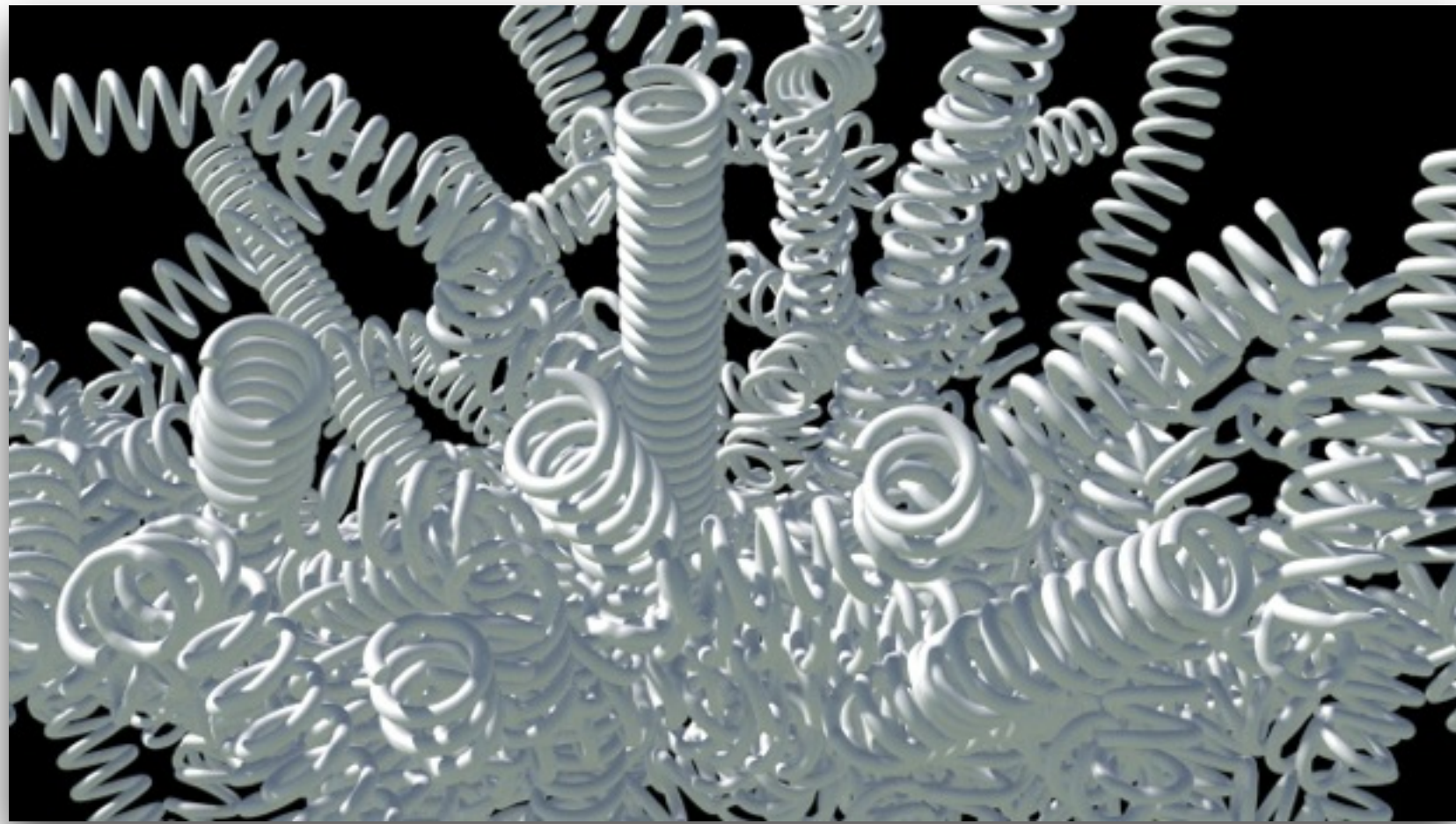




Creating Houdini Digital Assets

Part 1 - Introduction



Learn to Create a Simple Digital Asset

Identify Parts of your Network to promote to UI of Digital Asset

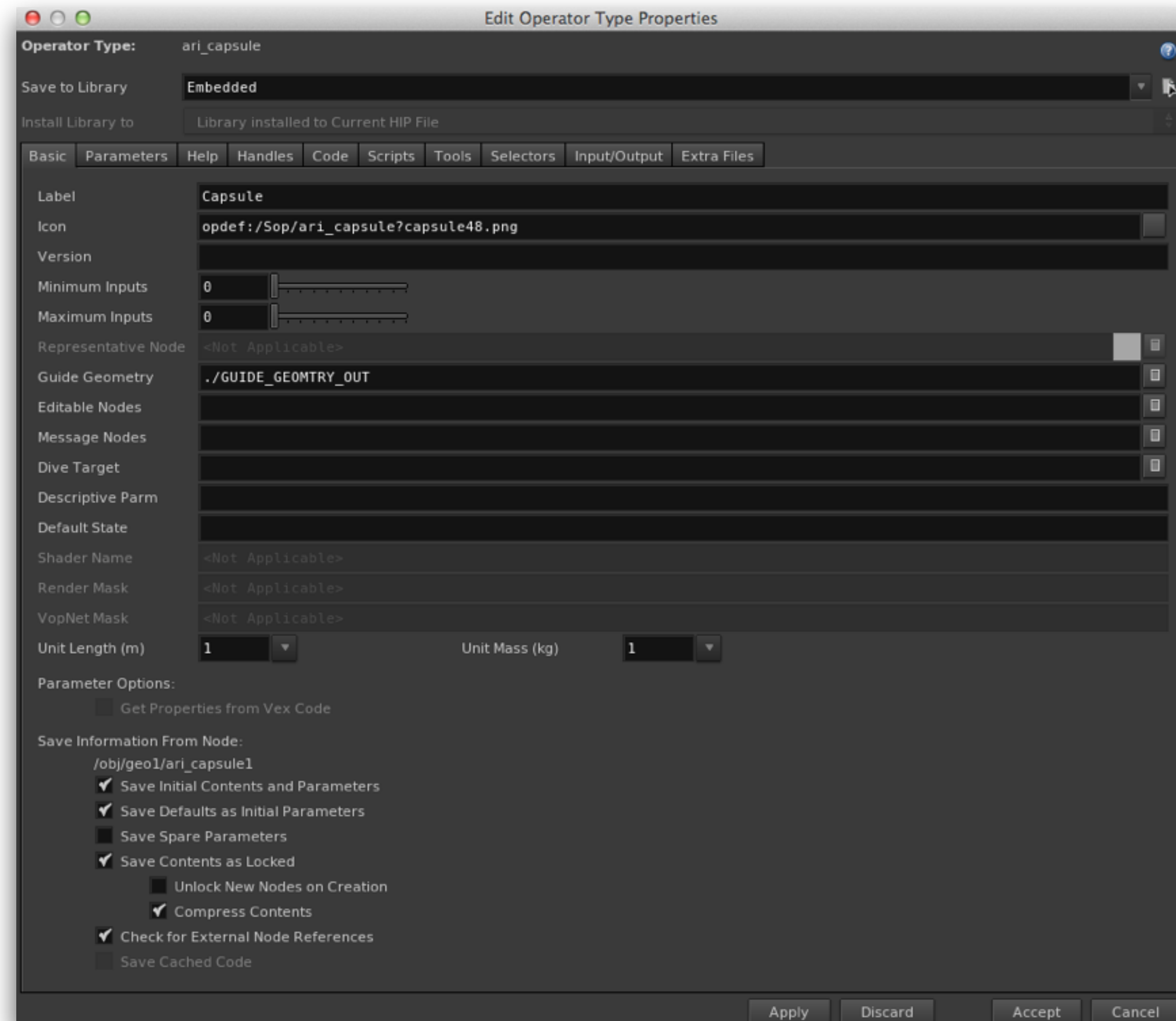
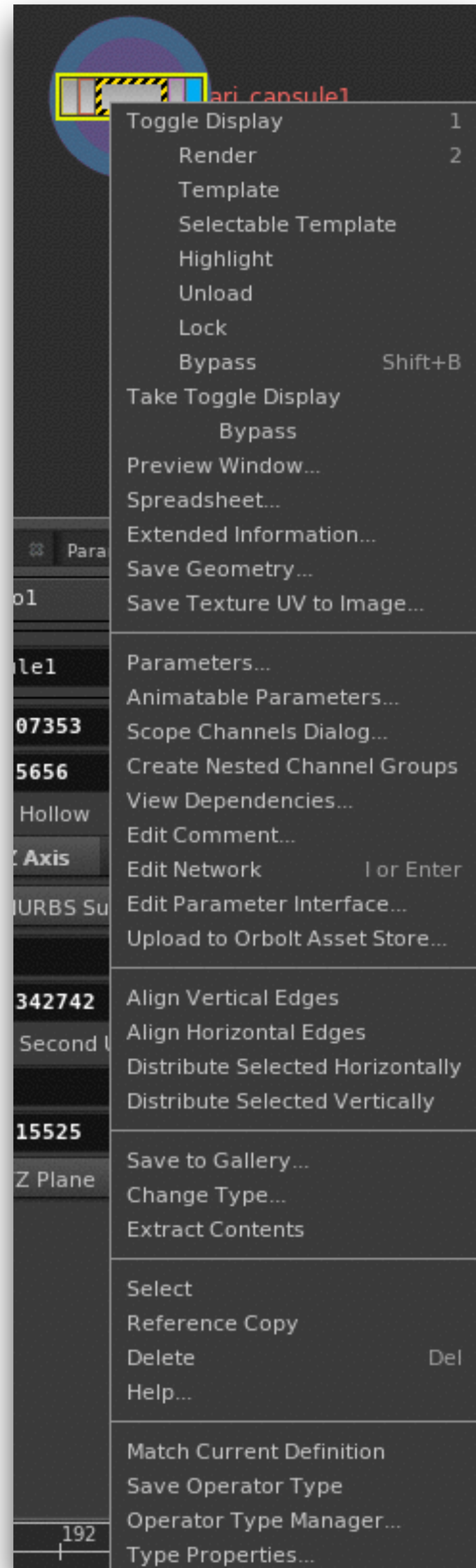
Understand the Panels of the Type Properties Panel

Create Guide Geometry

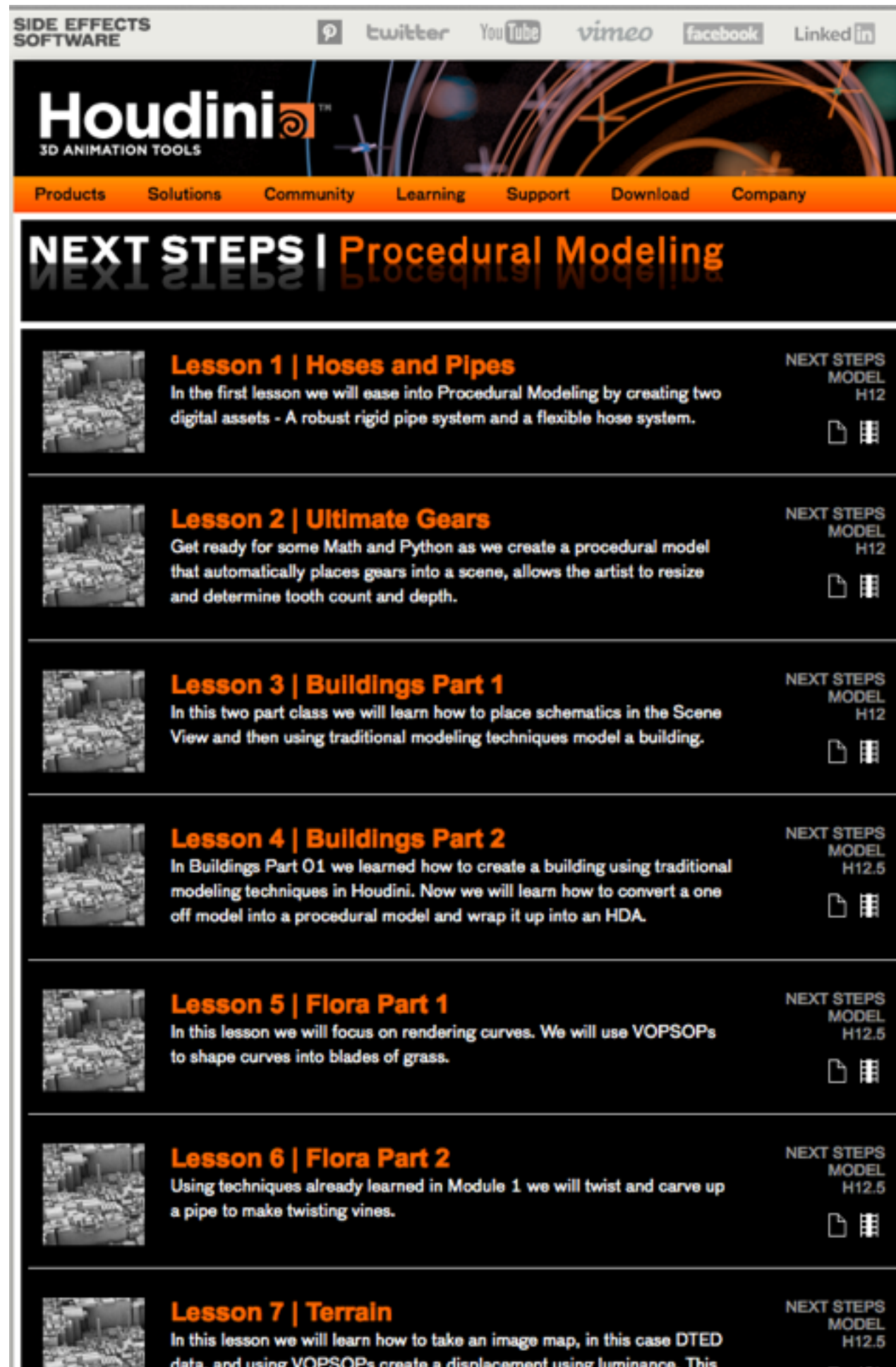
Create Handles

**We Will Not Be Creating Networks from Scratch
Just Making them into Houdini Digital Assets**

Bottom Line - Learn the Type Properties Window



Not a Procedural Modeling Workshop



If you need to learn Procedural Modeling...

http://www.sidefx.com/index.php?option=com_content&task=blogcategory&id=222&Itemid=383

SIDE EFFECTS
SOFTWARE



Project 01 - Capsule Asset

Objectives

Create a new primitive type (e.g., Cube, Sphere, Torus) named capsule

Digital Asset should allow the artist to control

Radius, Height, Bulge, Flatness

One or Two sided

Hollow

Orientation

UVs

Digital Asset should have

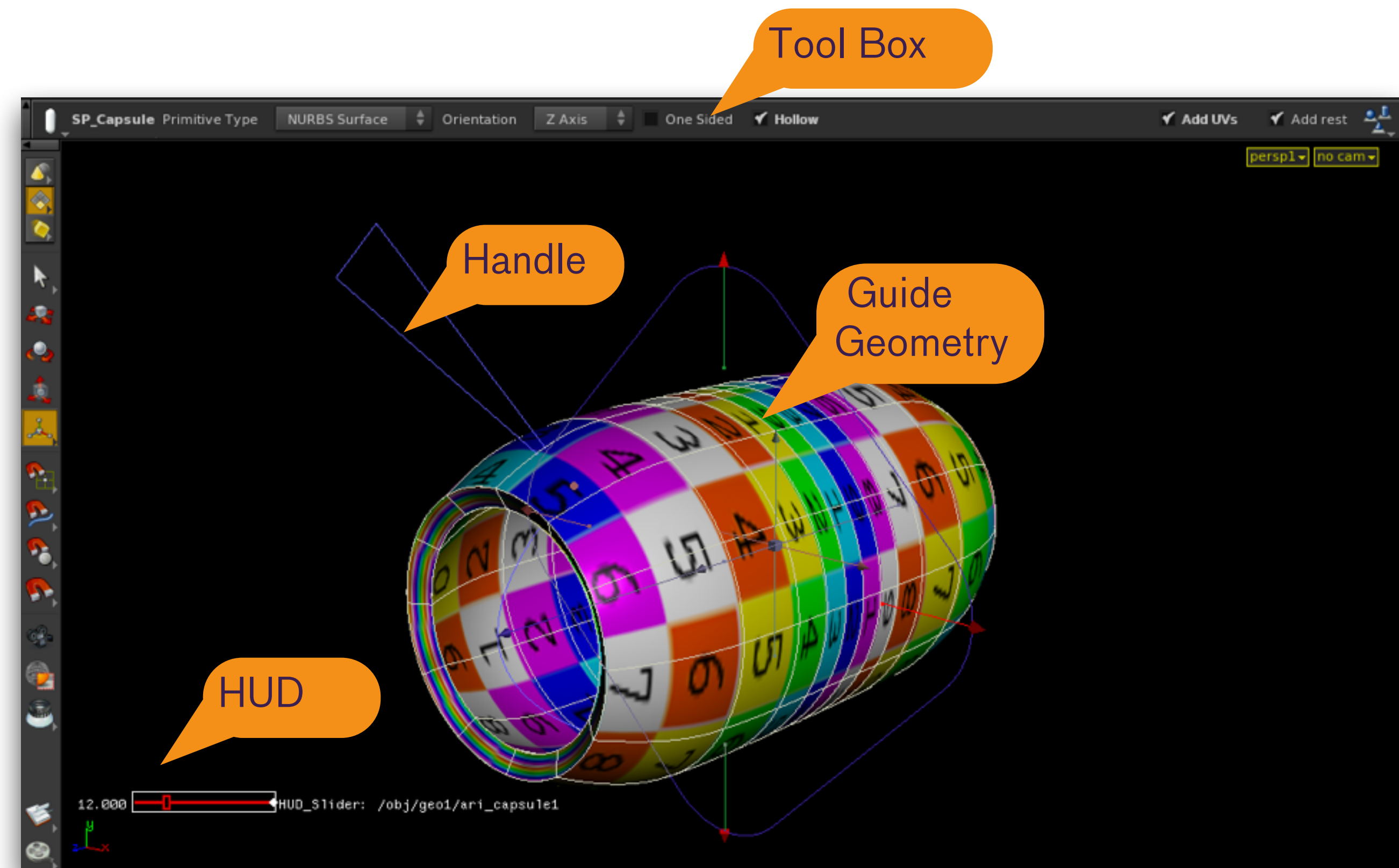
Guide Geometry

Handles

HUD Control

Tool Bar Controls

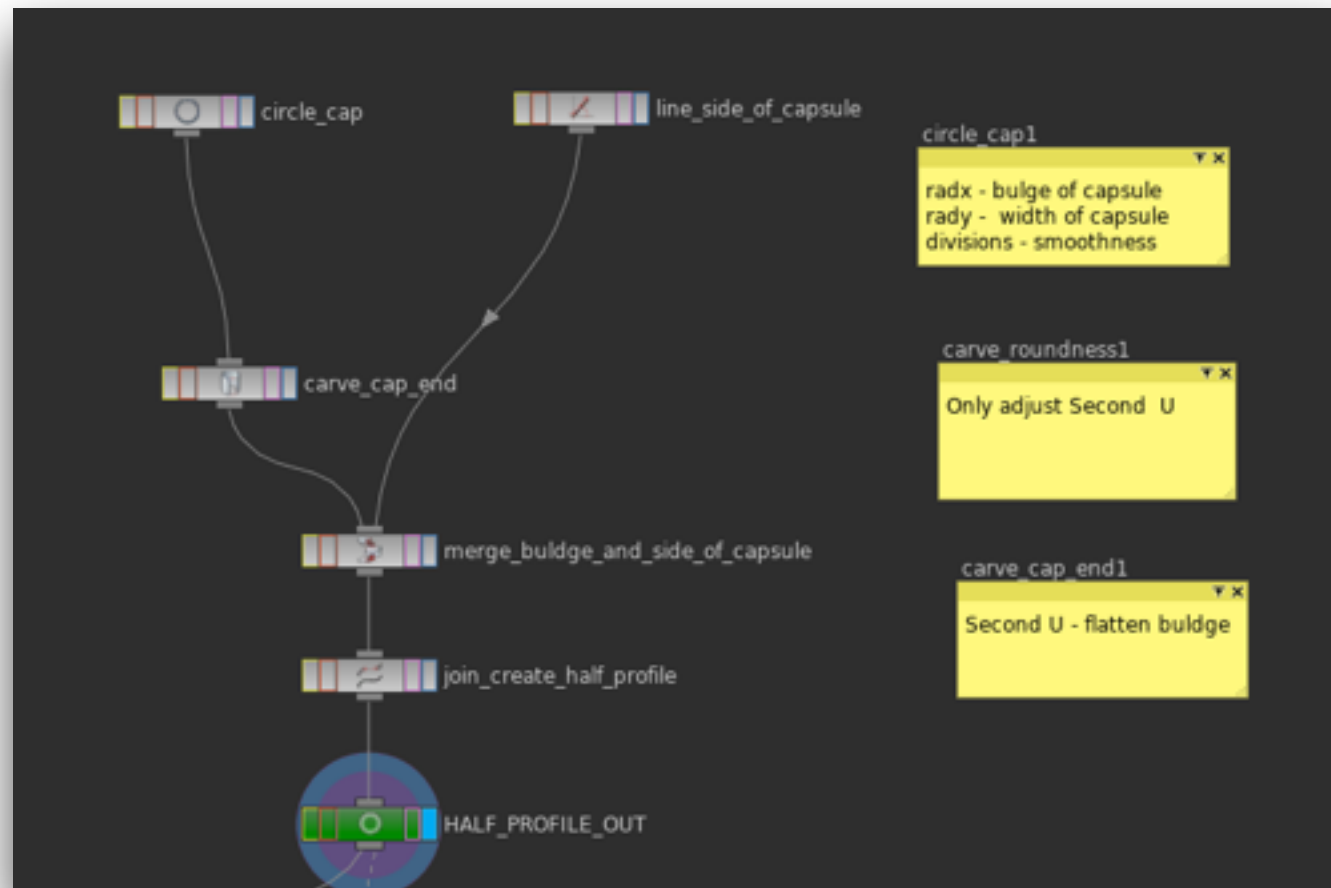
Icon Embedded into Asset





Understanding the Basic Network

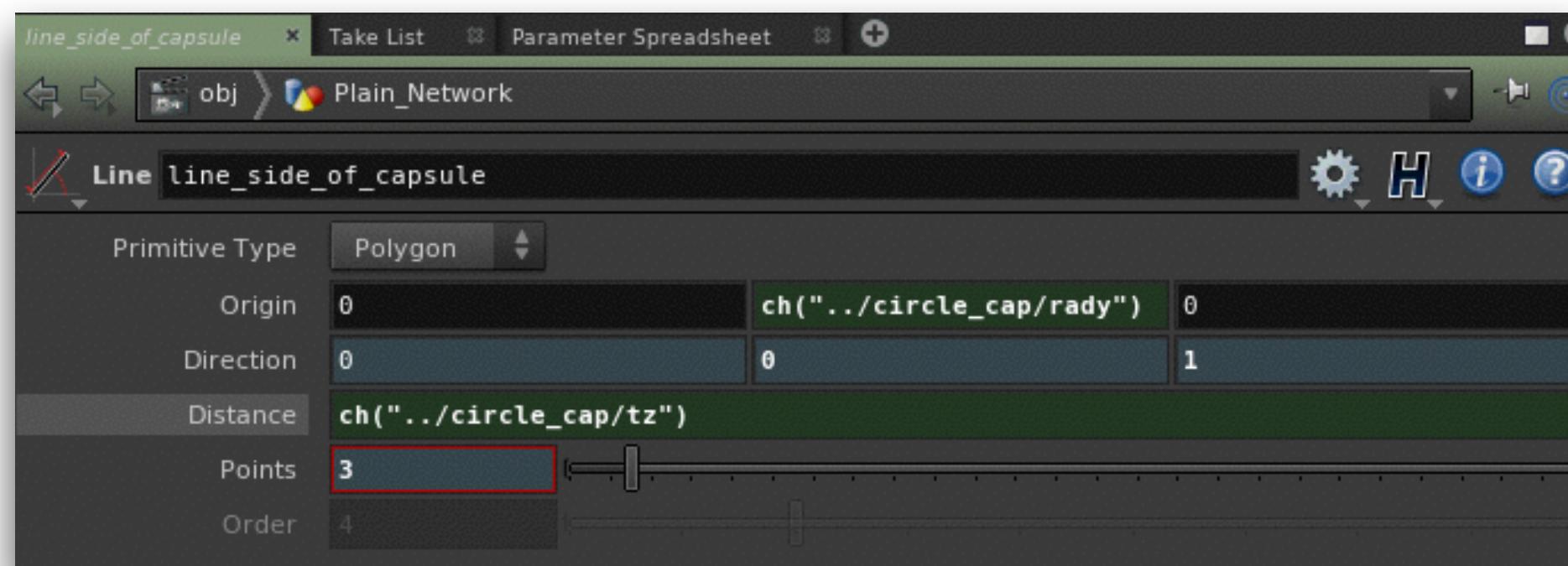
Understanding the Network



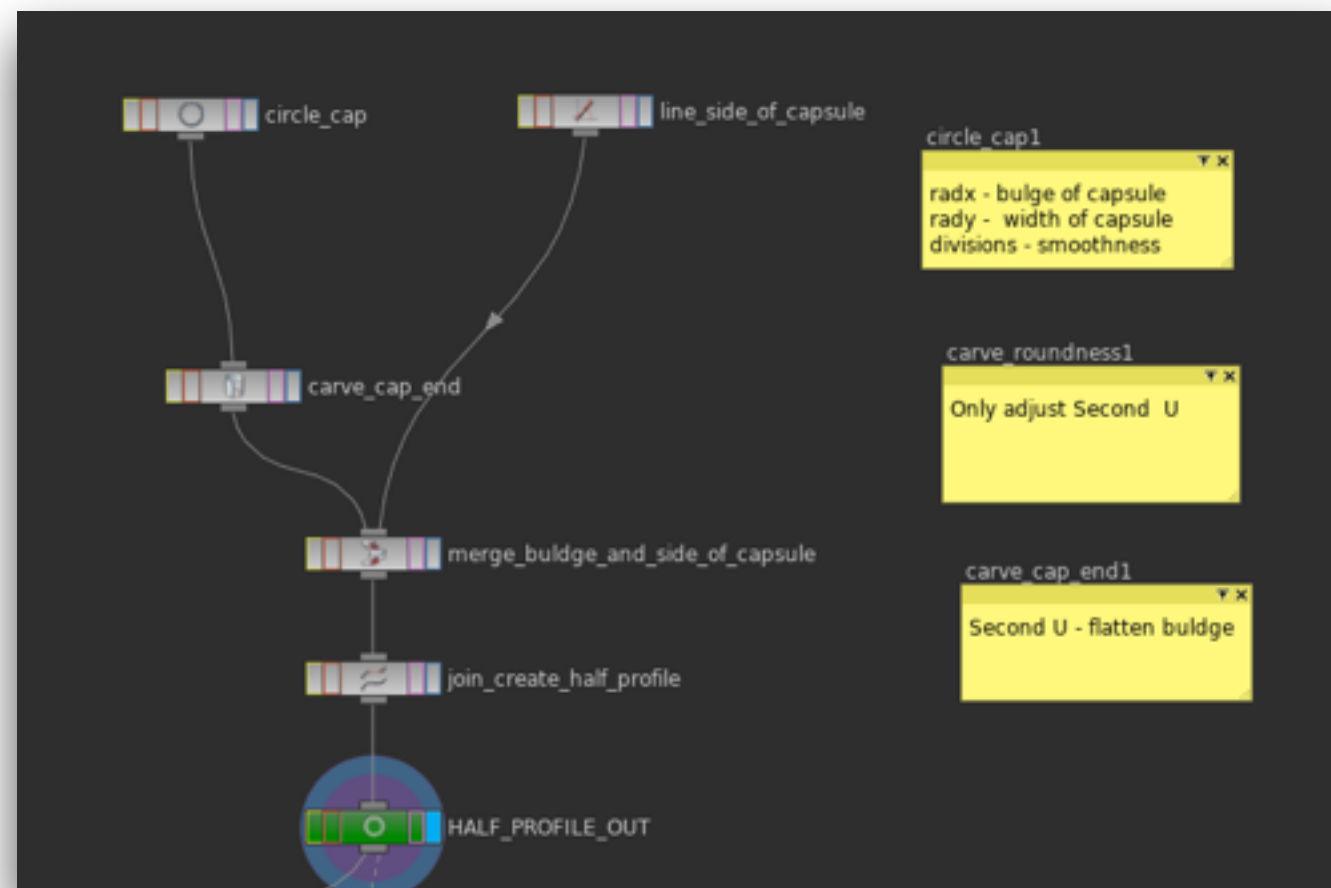
First we are going to create half of the profile of the Capsule

The Circle Determines the radius of the Capsule

The Line's ty and distance are determined by the Circle



Understanding the Network (cont.)



The Curve SOP will determine the “Flatness” of the bulge in the capsule

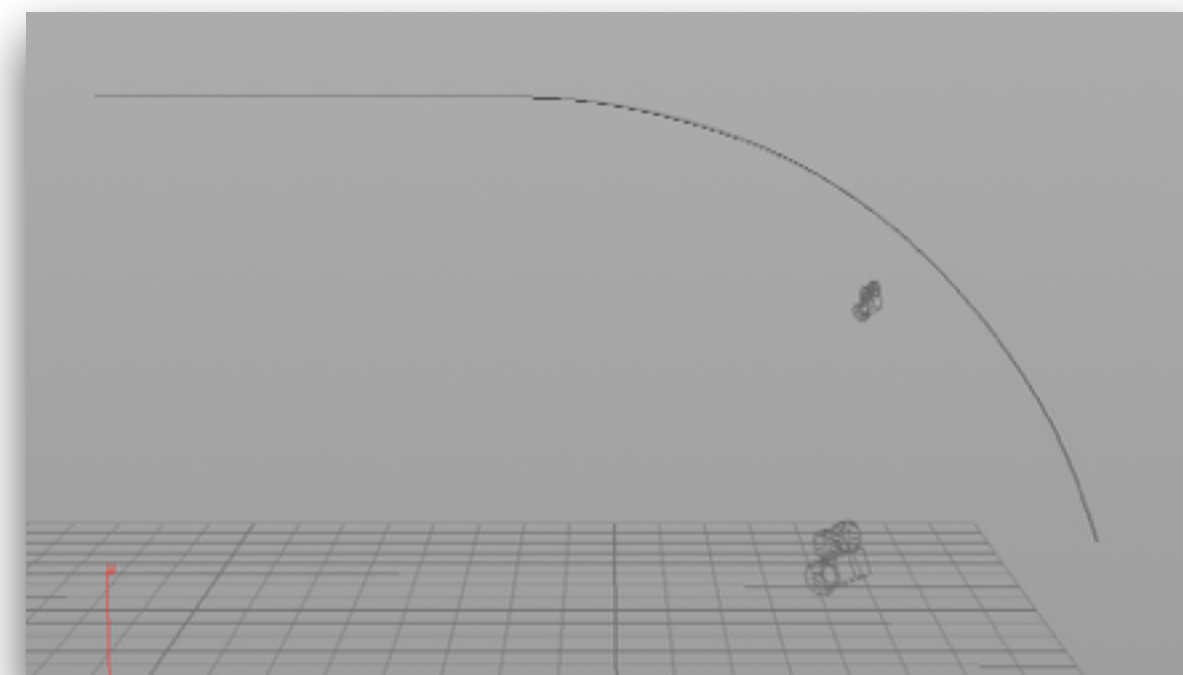
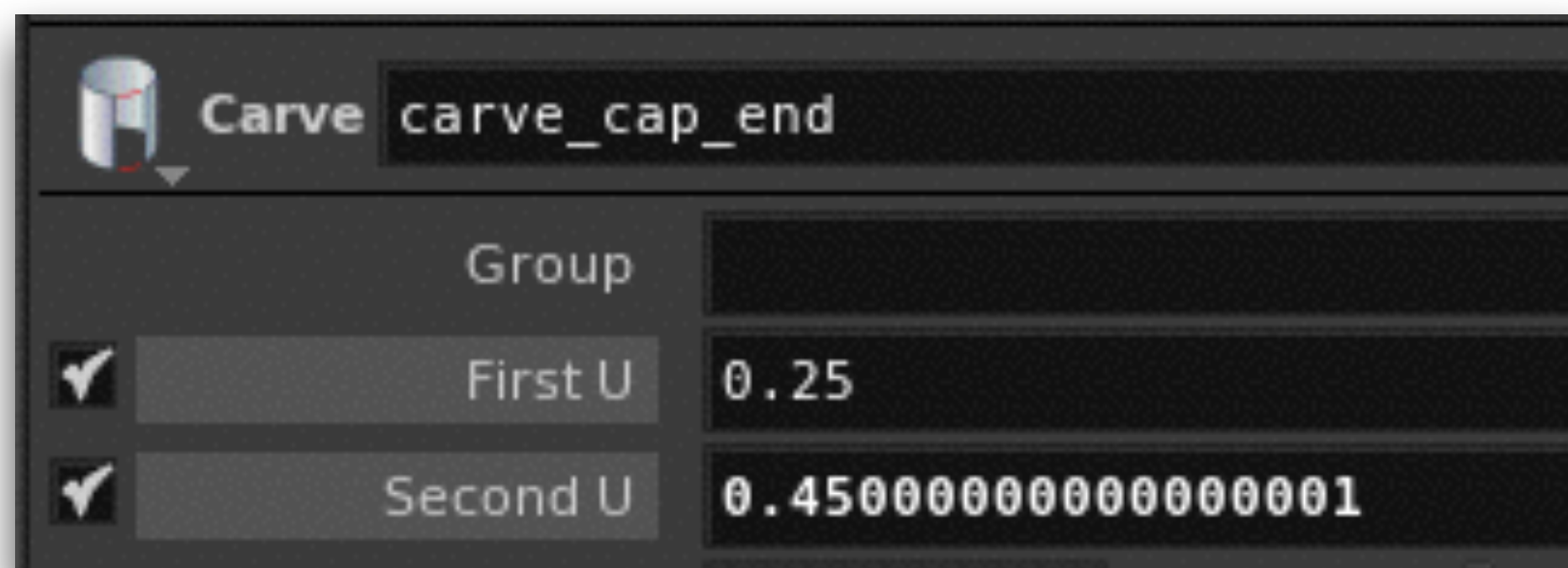
The First U is fixed to 0.25

This parameter should be locked so the network does not break

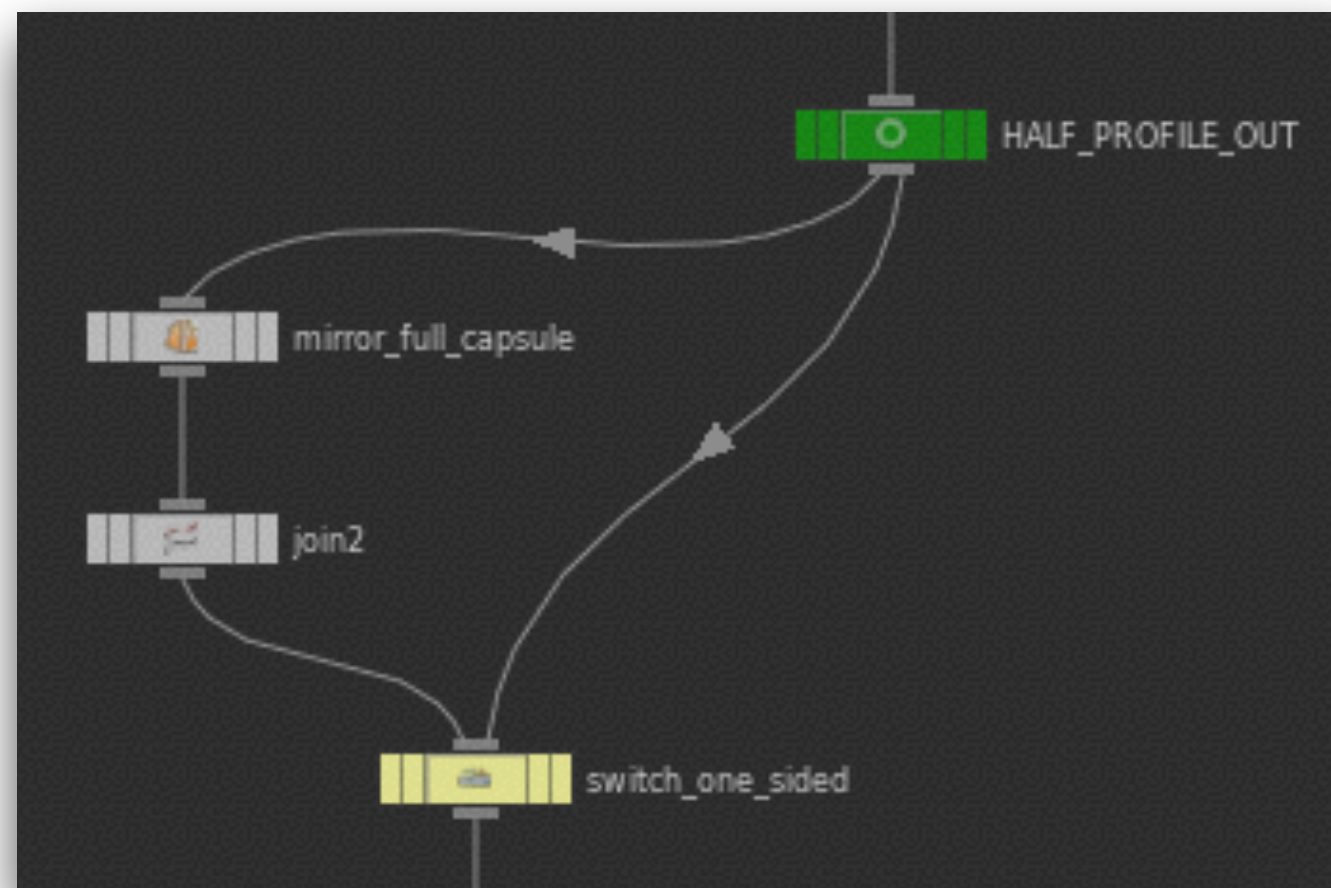
Lock it

The Second U is what determines the flatness of the bulge

The range can be from 0.25-0.5



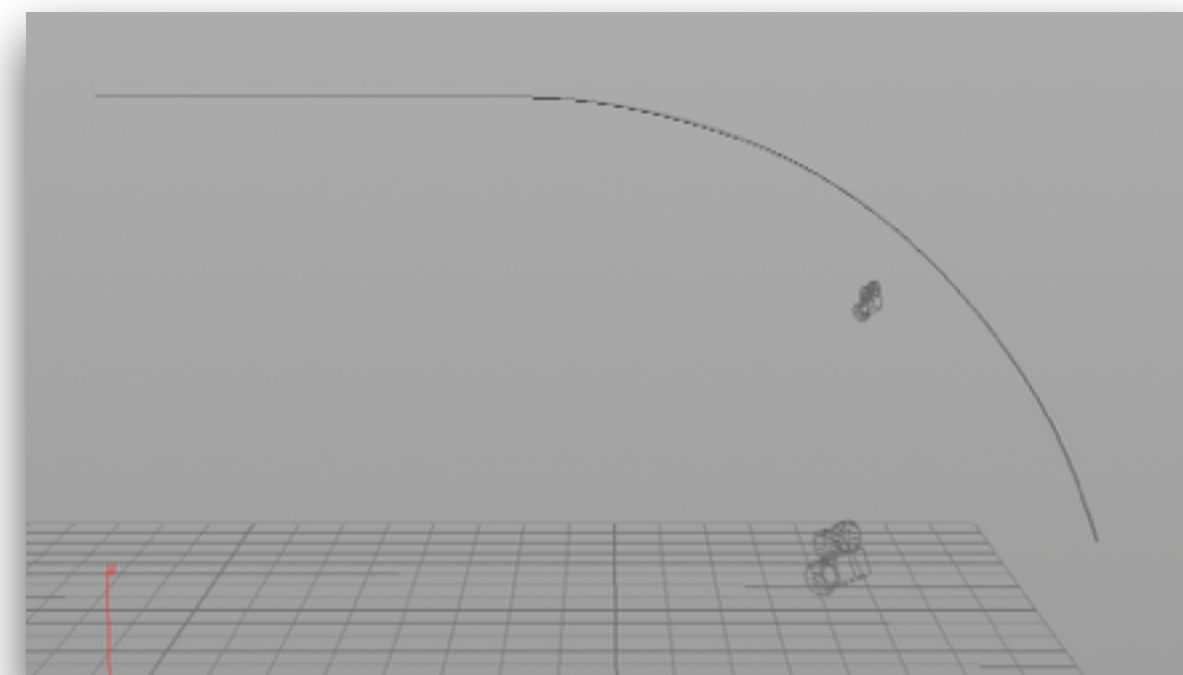
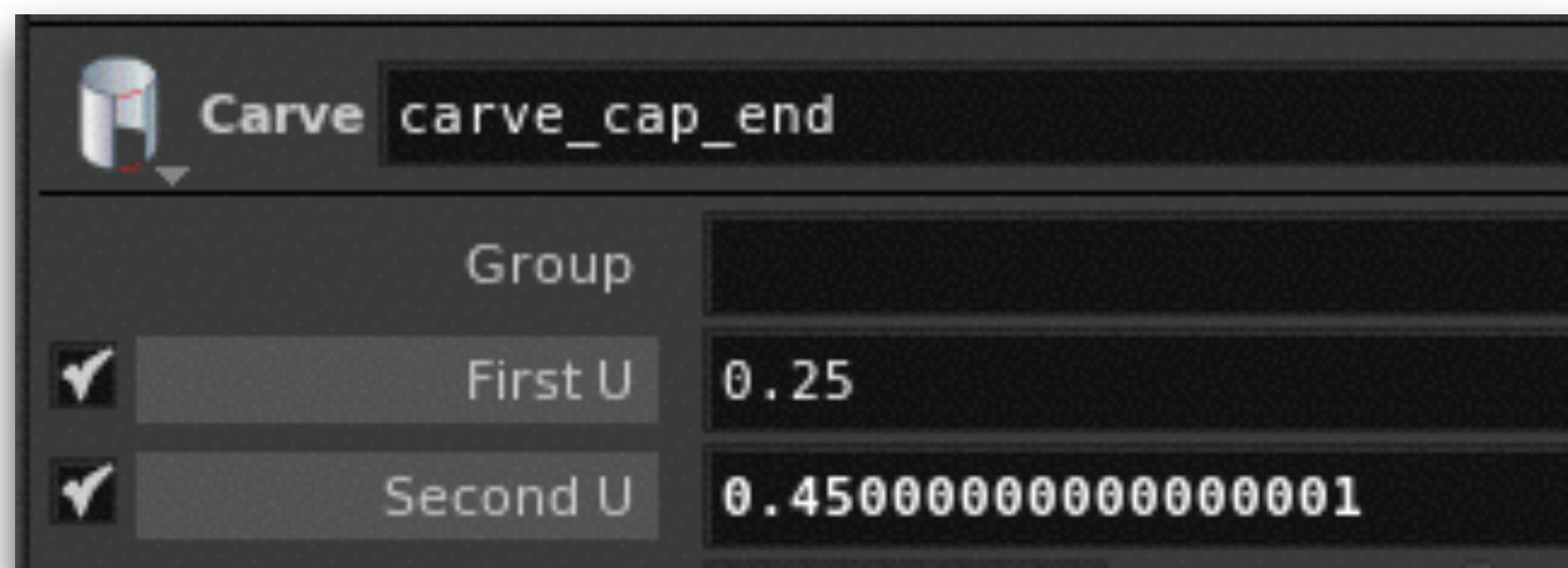
Understanding the Network (cont.)



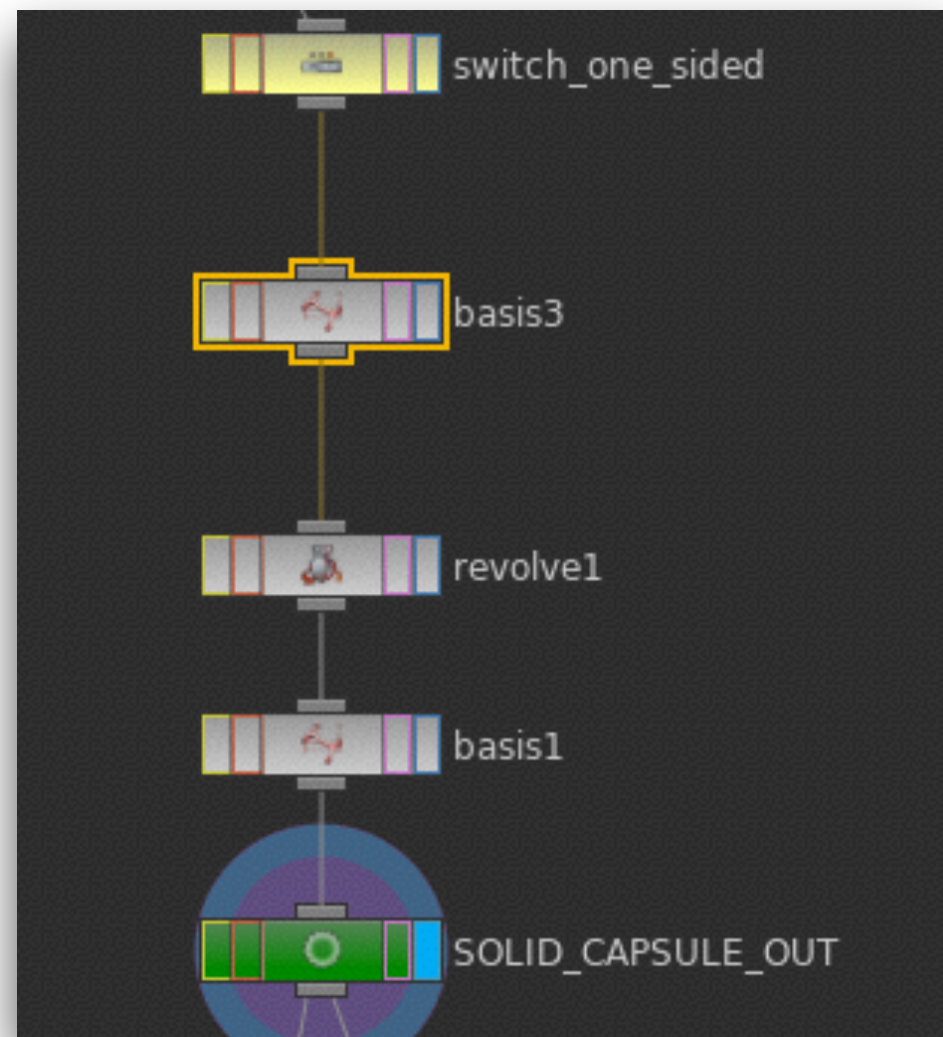
Now we want the Artists to be able to choose between a full capsule and a half capsule (silo)

We mirror the profile and join the two curves

A switch determines if it will be a full capsule or silo



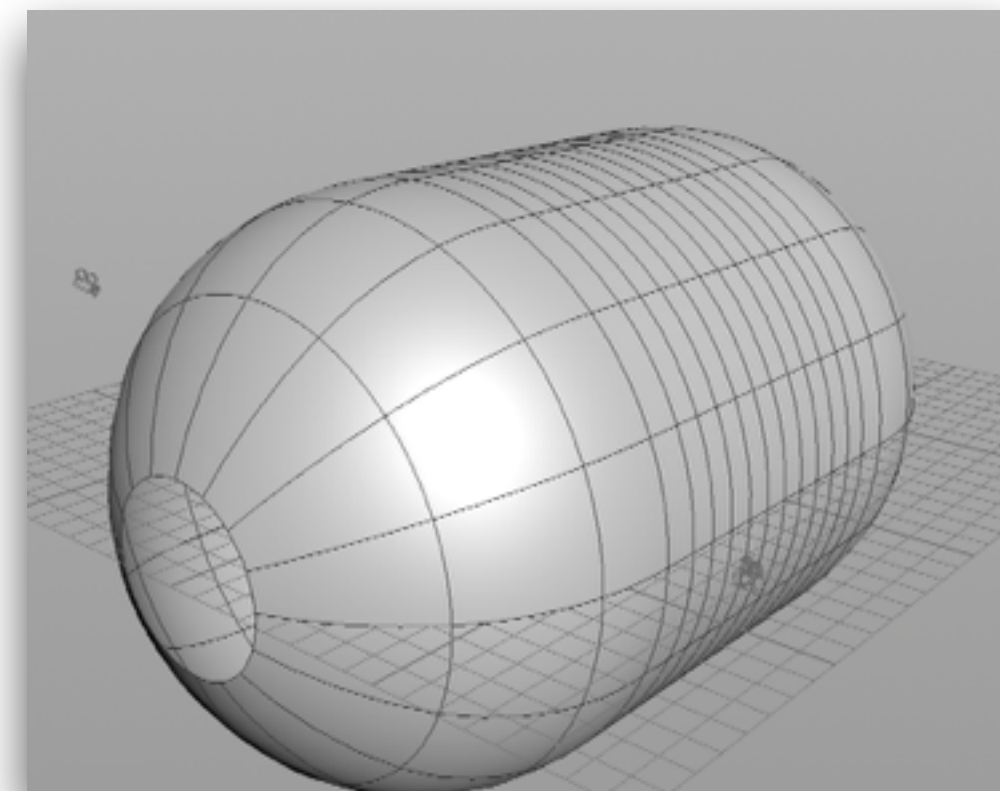
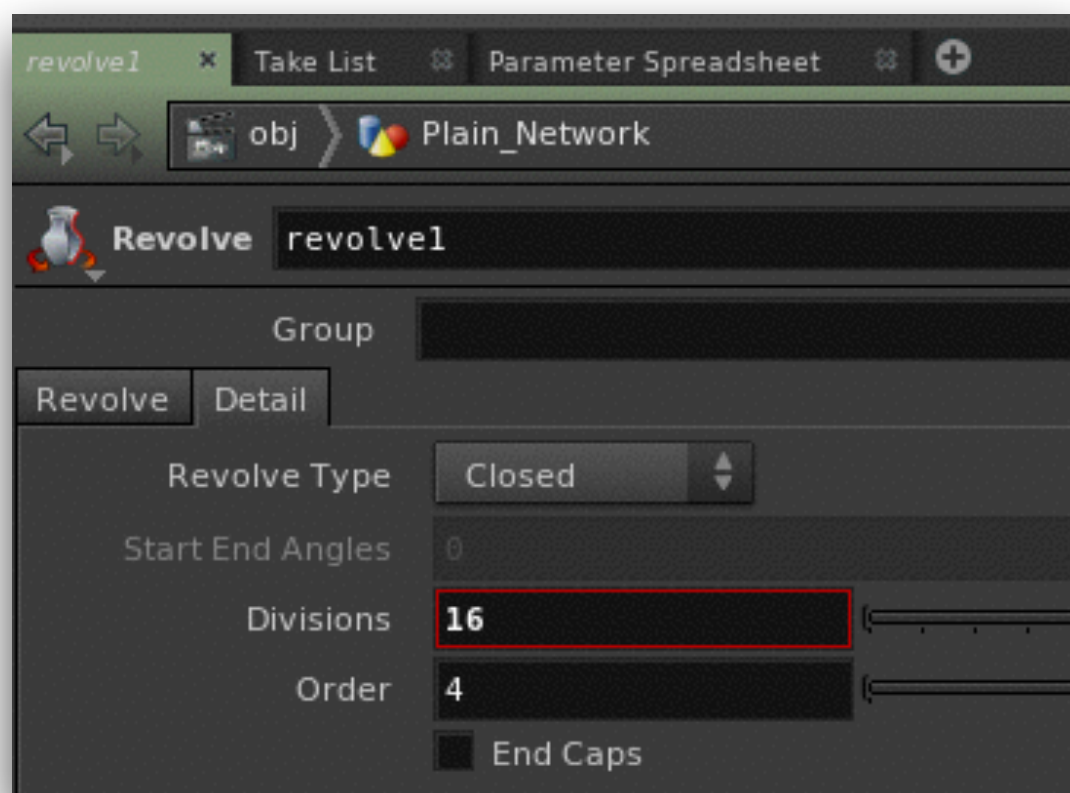
Understanding the Network (cont.)



To create clean uvs we are going to use the Basis SOP (see next slides)

Then we can revolve the curve into the capsule

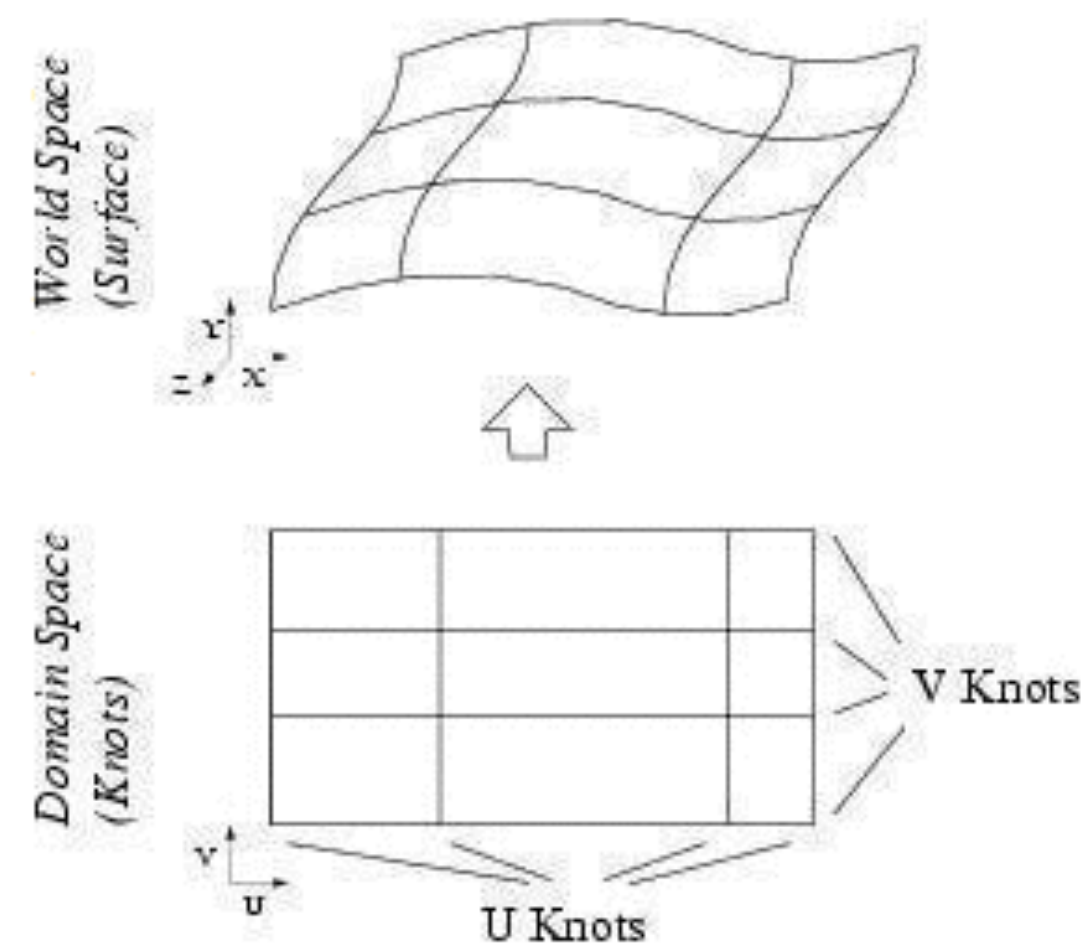
Another Basis SOP is used to clean up the knots in the Capsule's surface



First Diversion - Basis SOP

Provides operations for moving knots within the parametric space of a NURBS curve or surface.

This op provides a set of operations applicable to the parametric space of spline curves and surfaces. The parametric space, also known as the “domain” of a NURBS or Bezier primitive, is defined by one basis in the U direction and, if the primitive is a surface, another basis in the V direction. The size of the domain is given by the values of the knots that make up the basis.



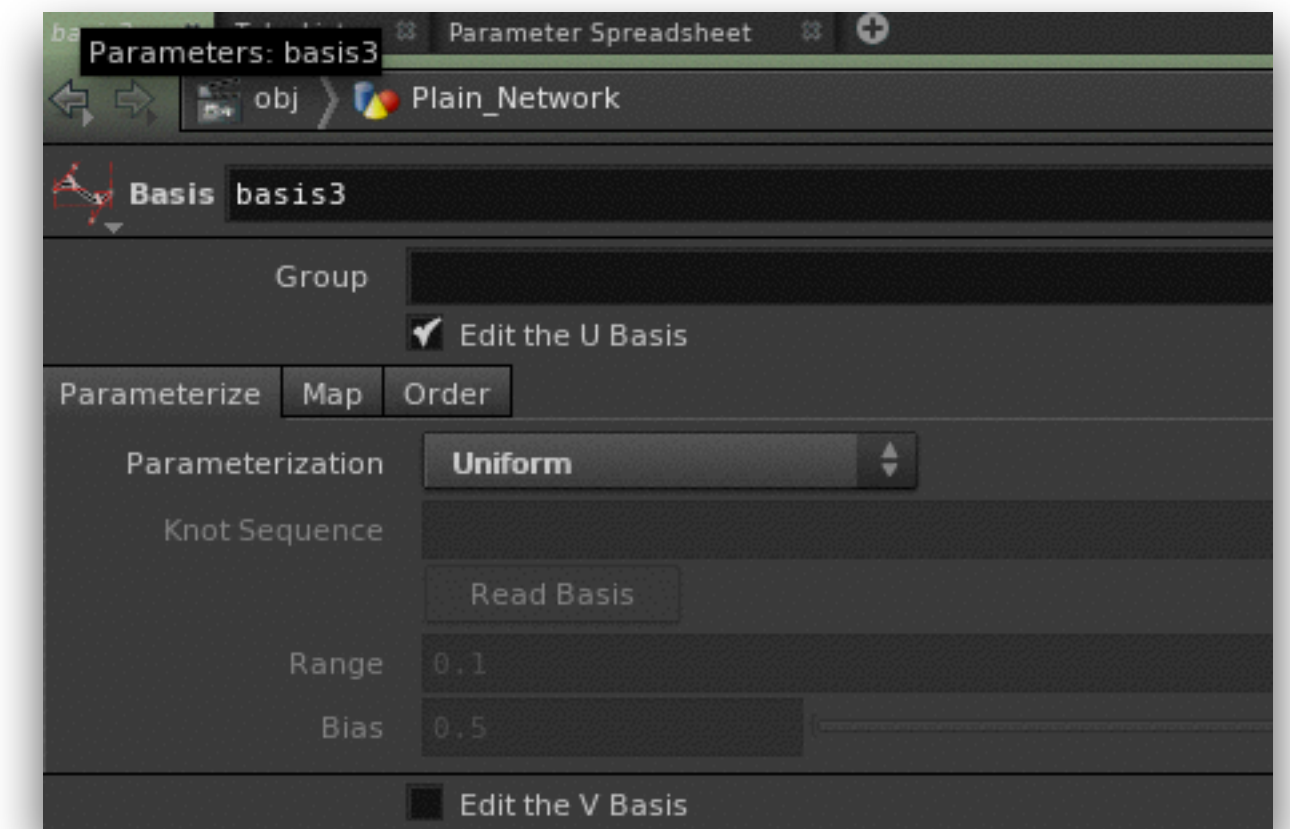
The Basis op contains both ratio-preserving and non ratio-preserving operations.

If the basis reparameterization does not change the distance ratios between knots, the shape of a NURBS primitive is not affected. If the ratios are not preserved; however, a NURBS primitive will change shape in the area influenced by the modified knots. Additionally, if the primitive is a NURBS or Bezier surface, any profiles it may contain will be affected as well.

First Diversion - Basis SOP

Parameterization

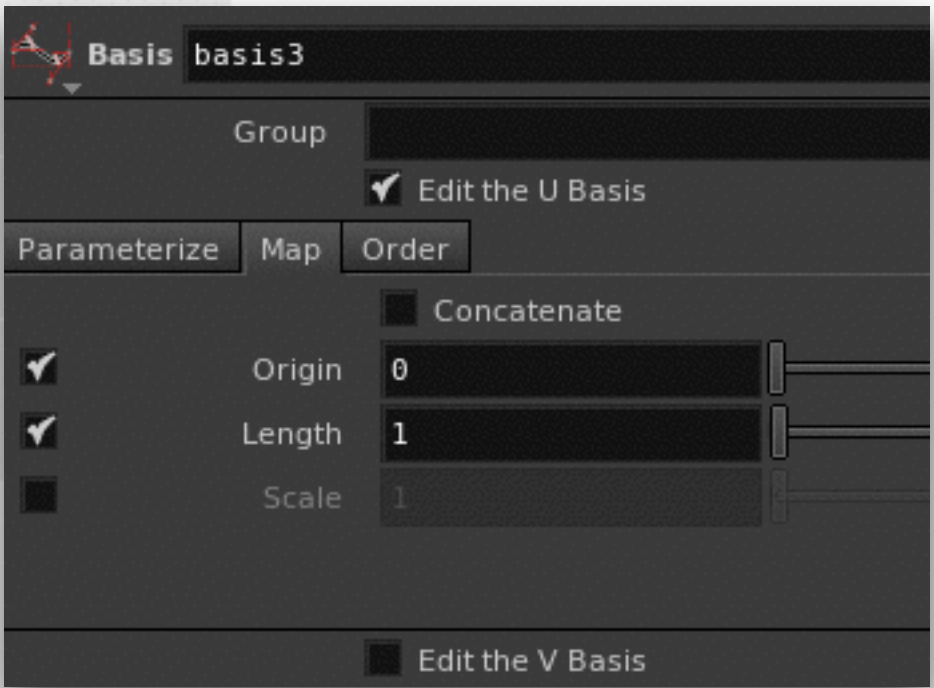
Parameterization	Parameterization method.	
	Unchanged	Does not change the U basis.
	Uniform	Distributes all knots evenly.
	Chord Length	Computes knot ratios based on primitive chord length.
	Centripetal	Similar to chord length, useful for sharp turns.
	Manual:Single	Edit knots of first spline primitive individually.
	Manual:Propagated	Same as above but copy knots to all other primitives.
	Knotslide	Shift clusters of knots within the basis.
	Approximate Arc Length	Computes knot ratio based on an approximate primitive arc length.
Knot Sequence	Editable field of knots in ascending order.	
Read Basis	Reads knots of first primitive into the field above.	
Range	Area of the unit U domain to be shifted.	
Bias	Amount and direction of shift in knotslide.	



First Diversion - Basis SOP

Map

Concatenate	Indicates whether bases should be concatenated.
Origin	New origin of the U basis.
Length	New length of the U basis.
Scale	Multiplier applied to basis at its origin.



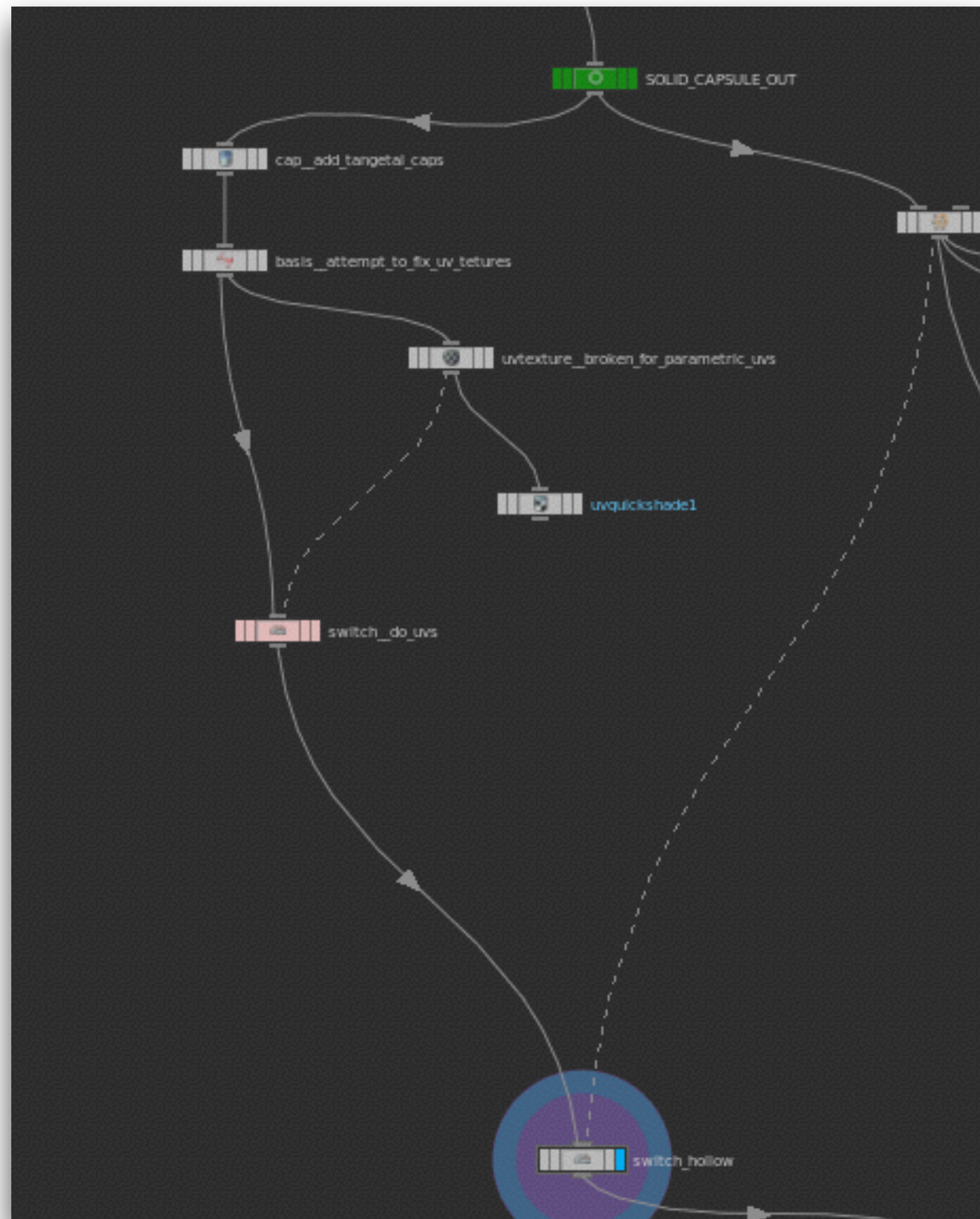
Determining Which Parameters to Promote

When creating a digital asset I like to color code all the nodes that have parameters that I want to promote. This way when creation the user interface it is easy for me to see where the parameters are that need a UI.

I usually use a pale yellow

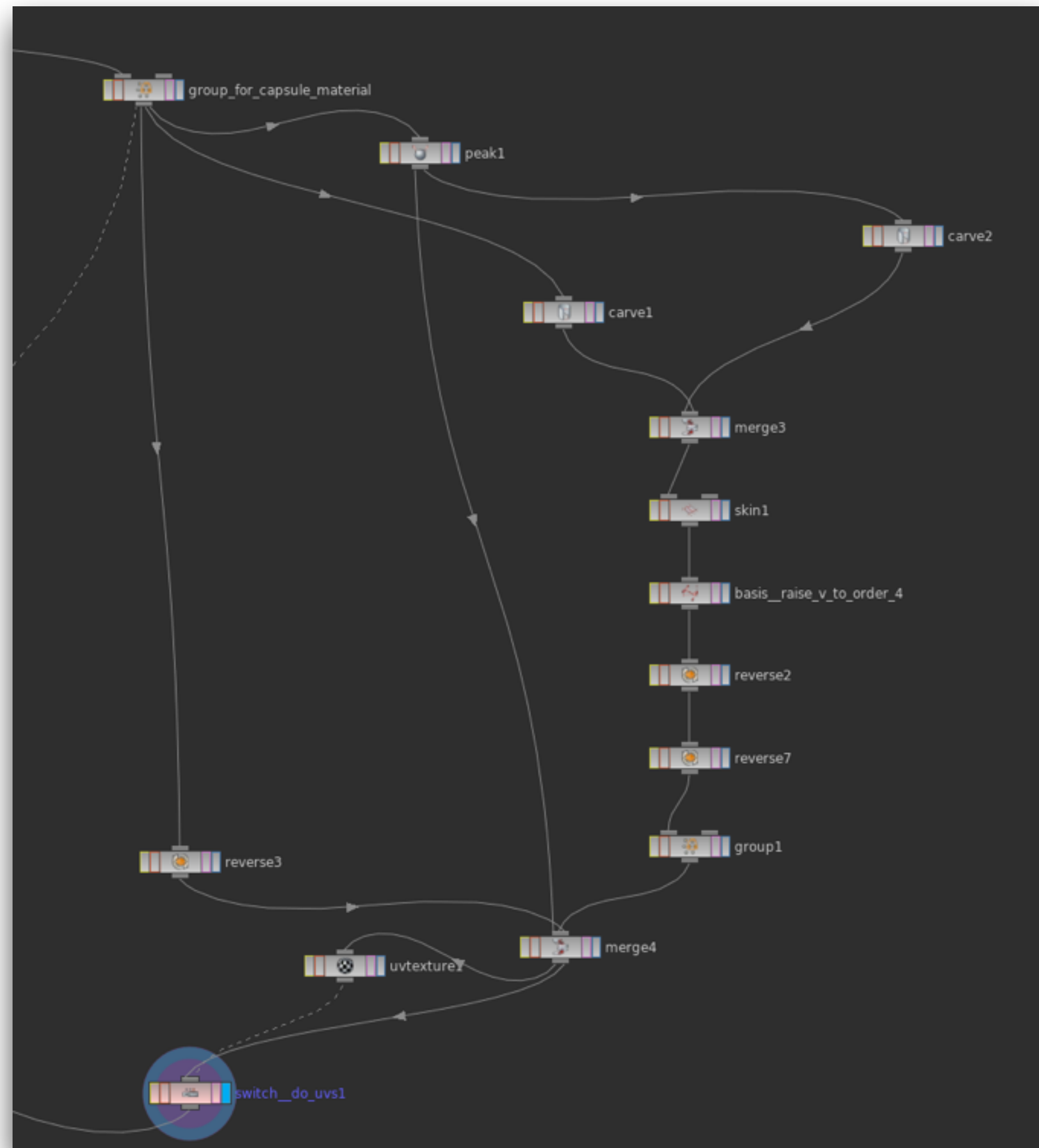
Refer to the Objectives slide for what parameters we need

Understanding the Network (cont.)



Two Switches to determine if the artist wants to apply uvs and if the artist want the Capsule to be hollow or not

Understanding the Network (cont.)



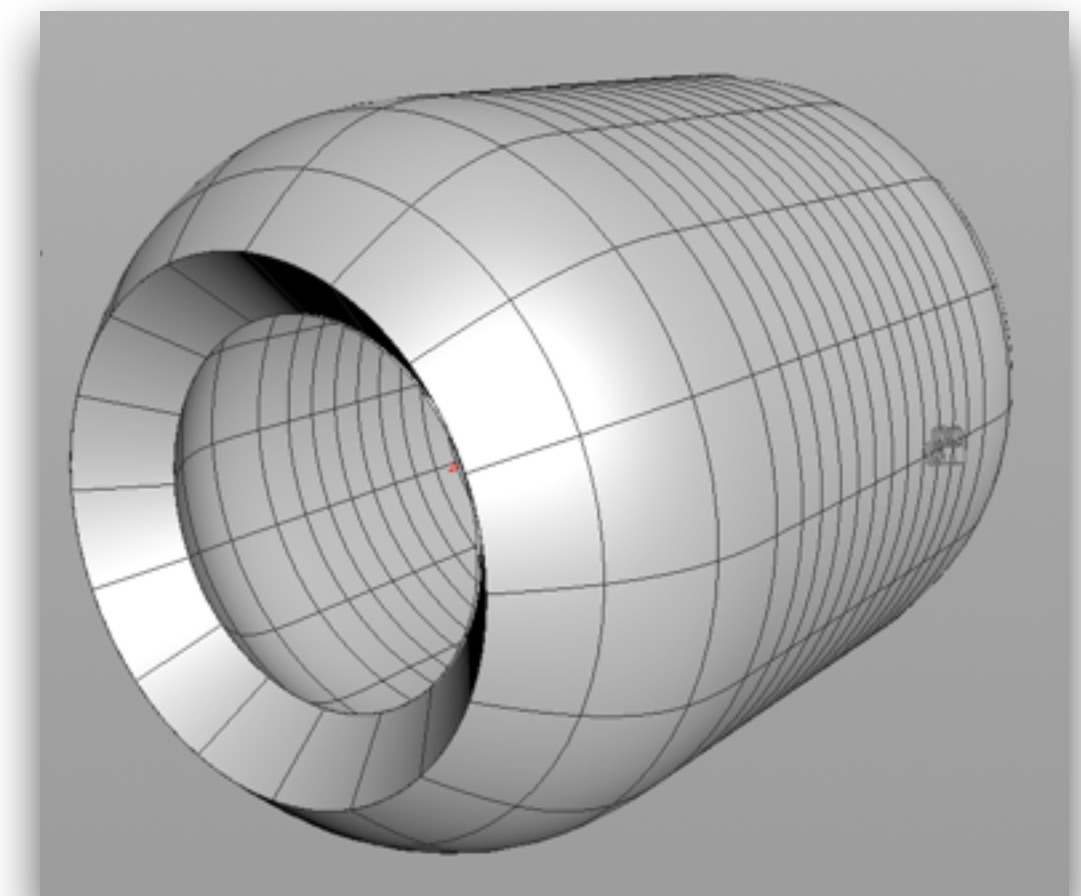
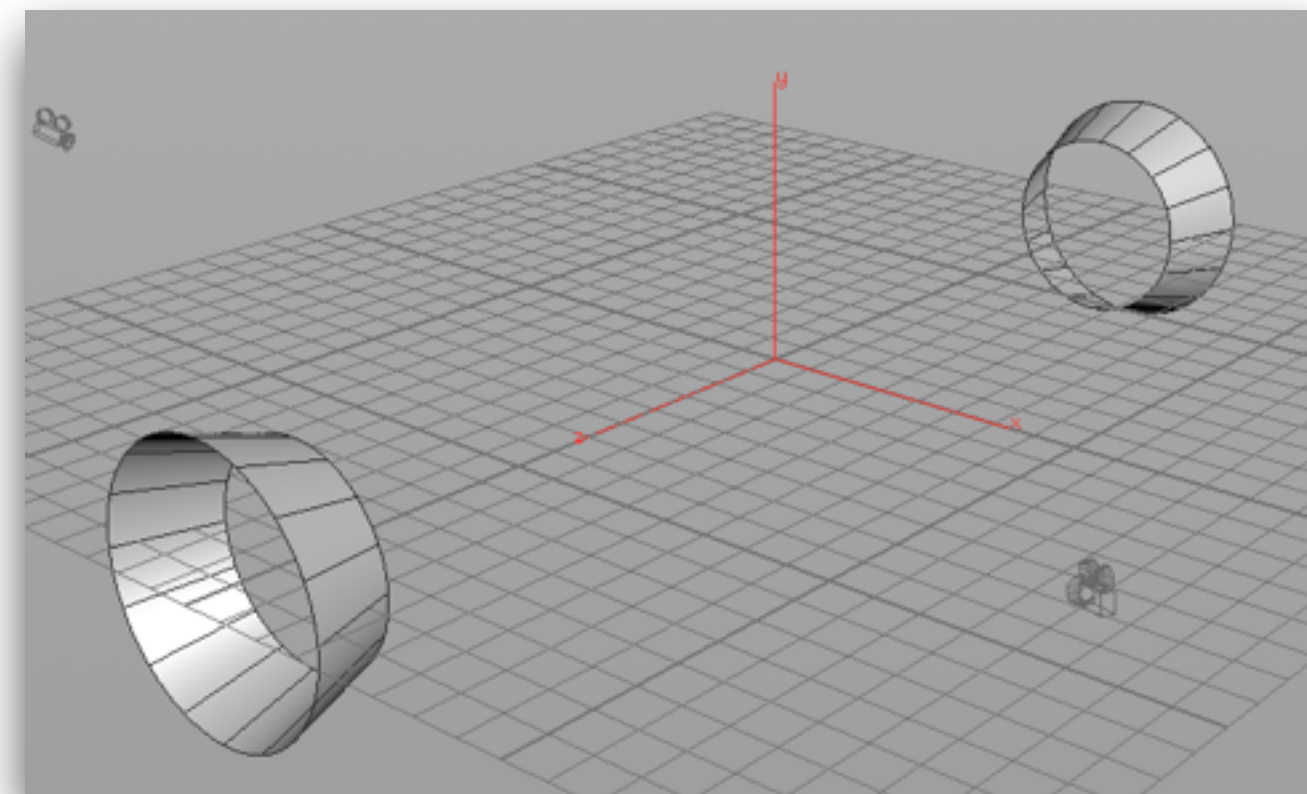
If the artist wants a hollow capsule he can then decide the thickness of the walls

We use a Peak SOP (see following slide) to shrink the capsule. This will become the inner wall

Carve SOP will leave only the end caps circle for both the inner and outer wall

We then skin the two circles to create the faces between the inner and outer wall

Finally we merge everything back together



Second Diversion - Peak SOP

Moves primitives, points, edges or breakpoints along their normals.

The Peak operation translates primitives, points, edges or breakpoints along each of their normals. If no group is specified, all the points are translated along their normals.

When using primitives, the points are translated along the average normal of their primitives. This differs from translating along the points' normal because only primitives specified in the group are considered and the points normal attribute is ignored.

Parameters

Group	Primitives, points, edges or breakpoints to translate.
Group Type	The type of elements referenced in the group field.
Distance	The translation distance.
Recompute Point Normals	Recomputes point normals if they exist.



Creating the Basic HDA

Reminder - Objectives

Create a new primitive type (e.g., Cube, Sphere, Torus) named capsule

Digital Asset should allow the artist to control

Radius, Height, Bulge, Flatness

One or Two sided

Hollow

Orientation

UVs

Digital Asset should have

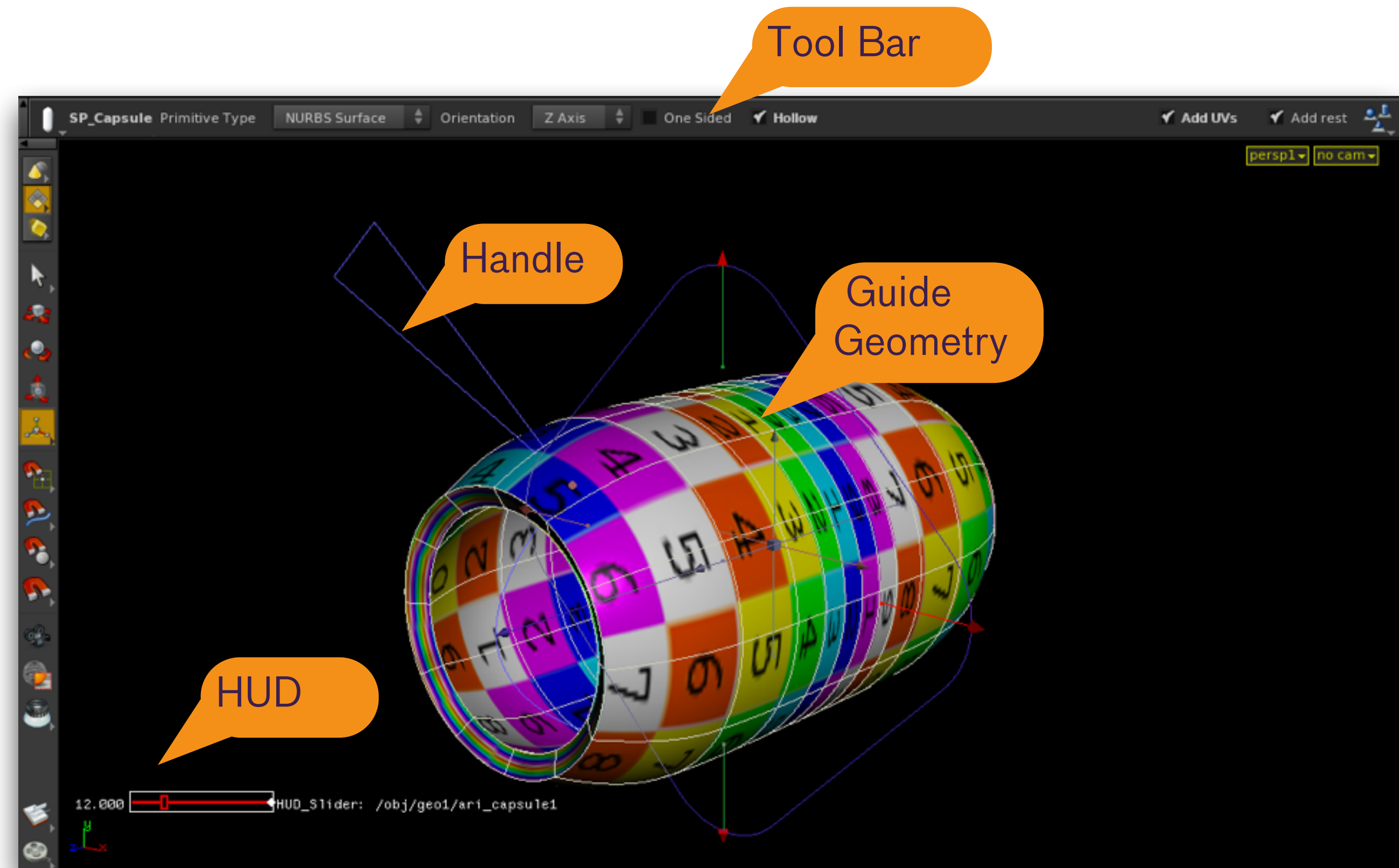
Guide Geometry

Handles

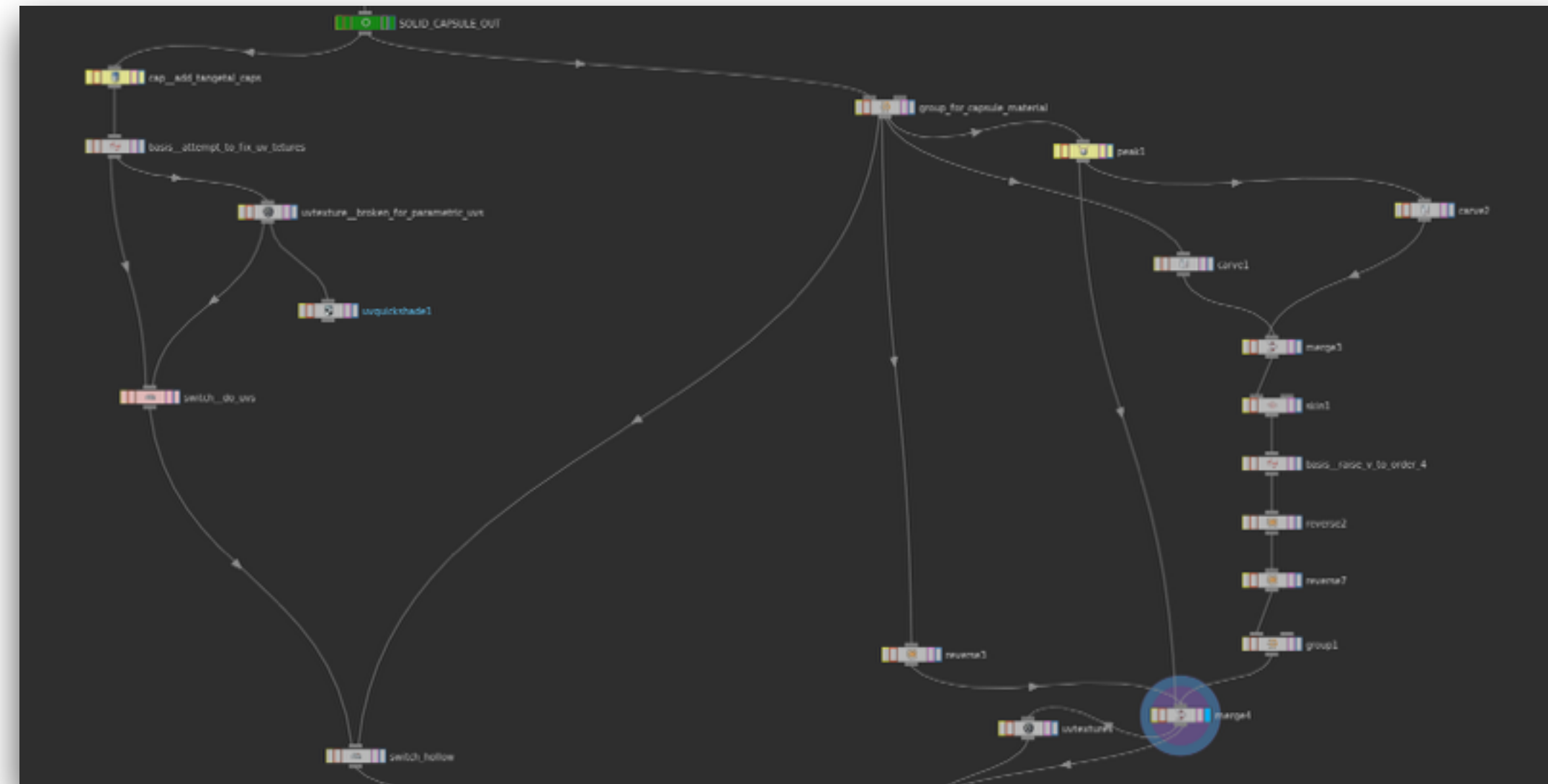
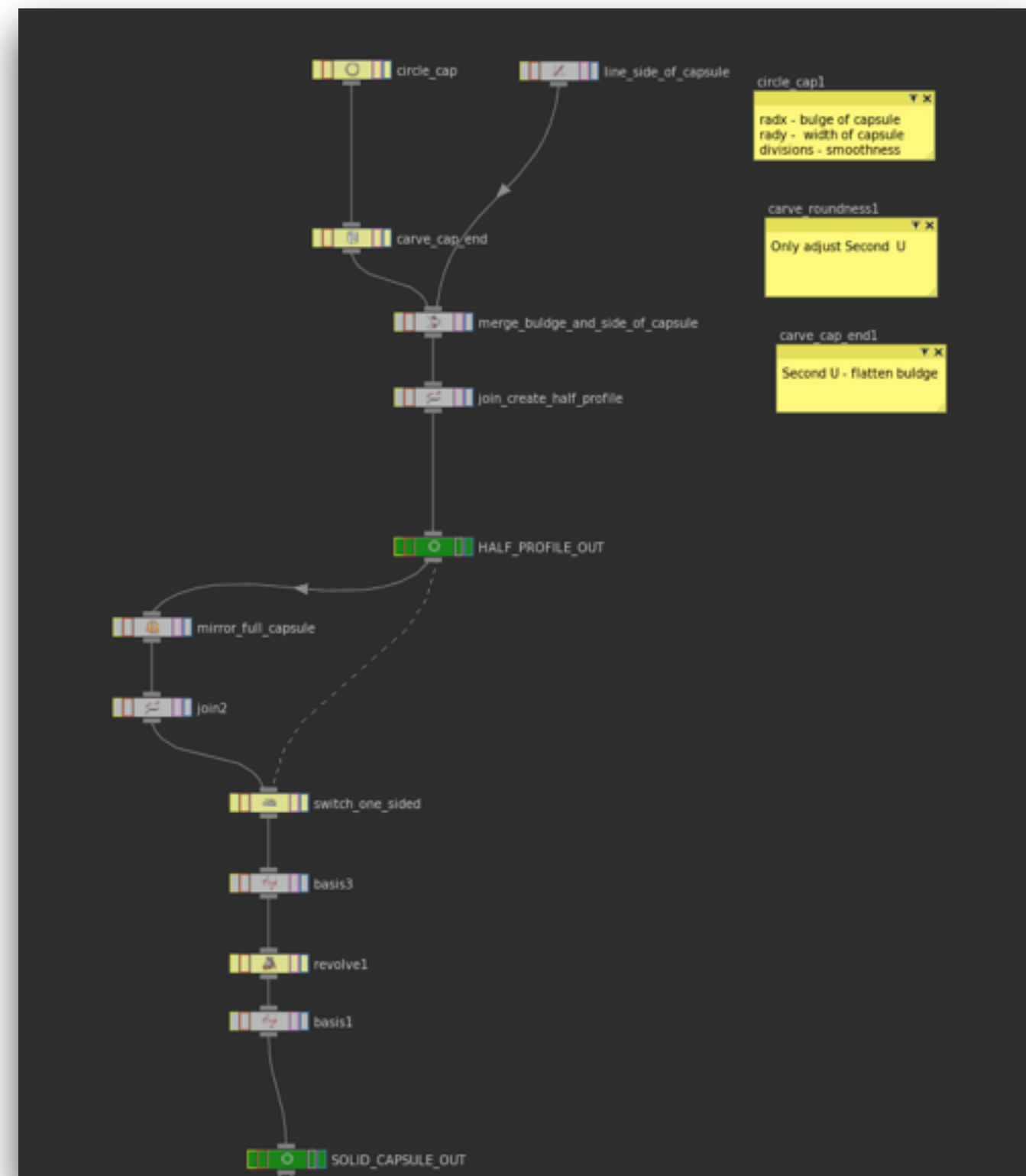
HUD Control

Tool Bar Controls

Icon Embedded into Asset



Step One - Identify Parameters to Promote to Digital Asset



Color the Nodes that have Parameters that you want to Promote a light yellow. This will be your visual Todo List

Creating an HDA

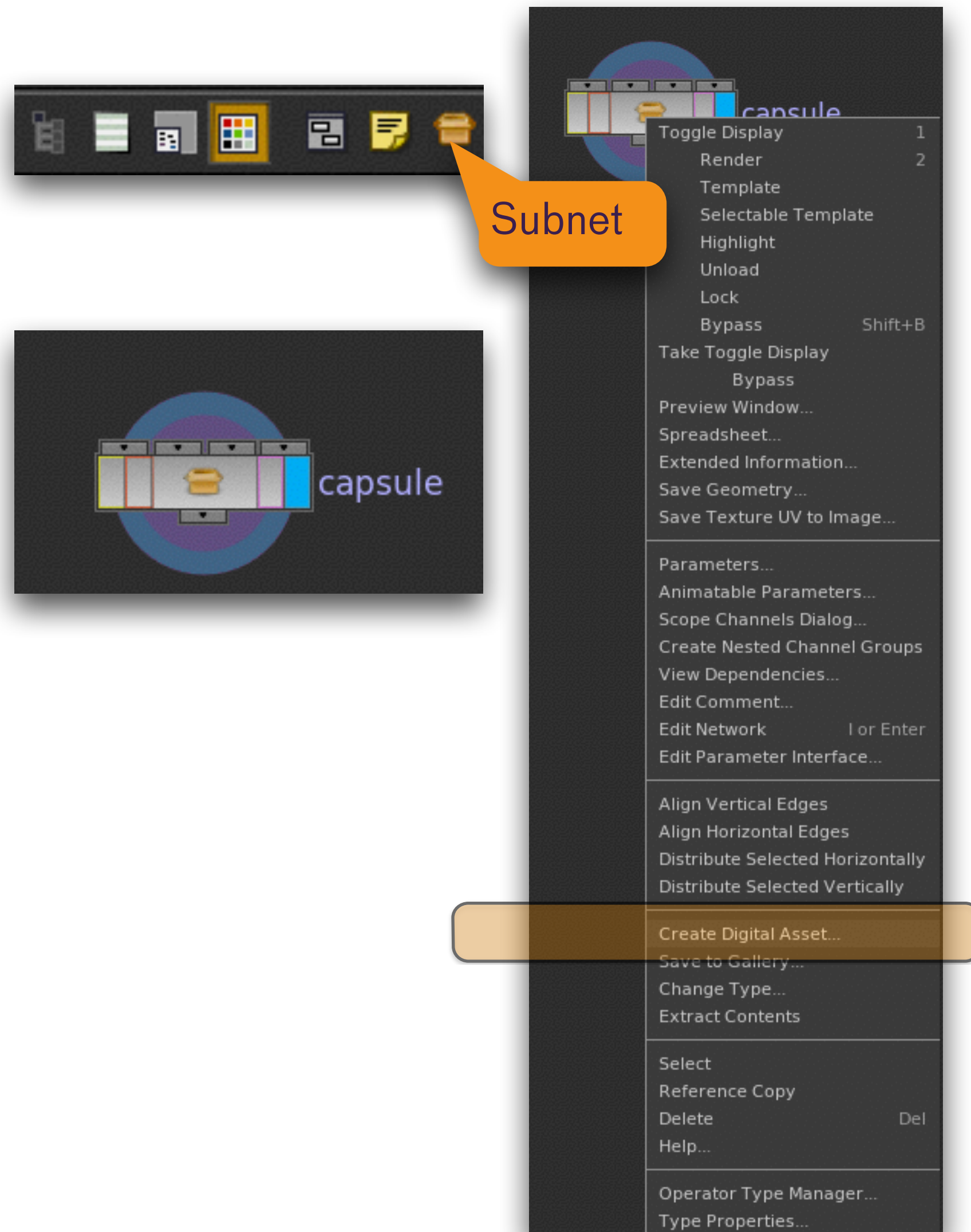
Creating a SubNetwork

Creating an HDA

Where should I save it?

Naming and Versioning

Creating the Digital Asset



1. Select all the Nodes you want as part of the Digital Asset

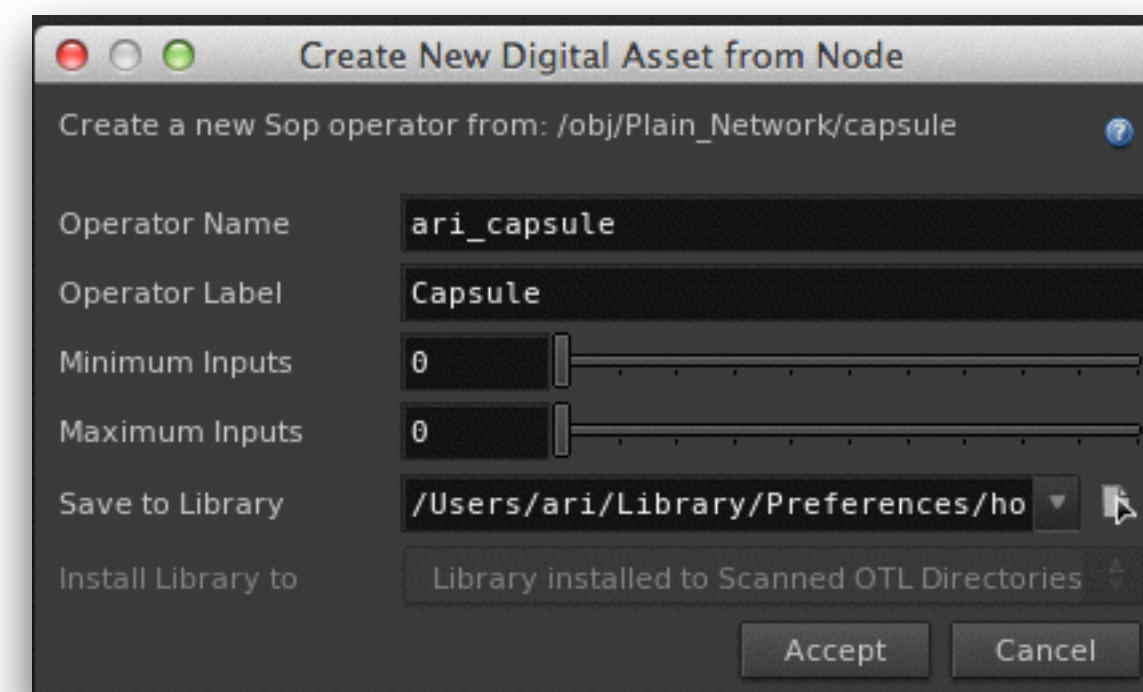
2. Put the nodes in a subnet using either the toolbar icon or the keyboard shortcut Shift-C

Rename the subnet “capsule”

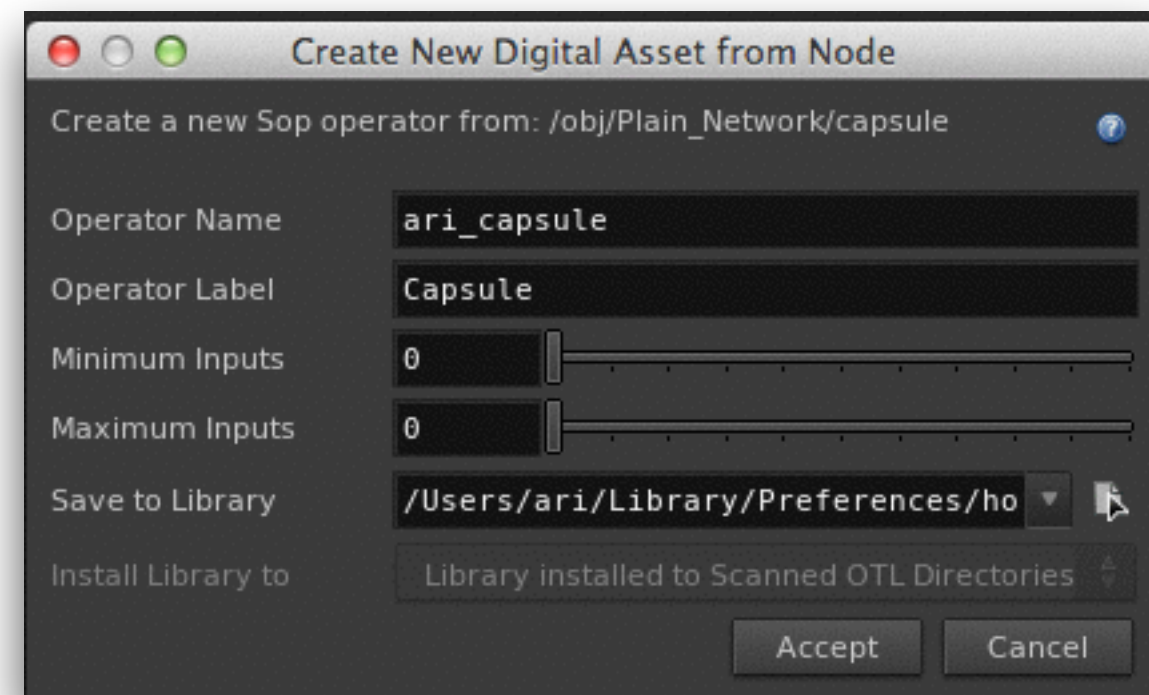
3. Right Click on the Capsule subnet and select “Create Digital Asset

4. A “Create New Digital Asset from Node” dialog box appears

(continued on next slide)



Creating the Digital Asset (cont.)



Operator Name - When the Capsule SOP is dropped down in a network what label will it display

Operator Label - Name seen when going through the Tab Menu

Min/Max Inputs - How many input contexts can be wired to the node

Save to Library - Where should the OTL be saved

OTL? -next
slide

What is an OTL?

You save digital assets in operator type library files (OTLs)

Depending on where you save the OTL file

- You can make it available to every user,

- To every project, to all files in one project, or just in one scene

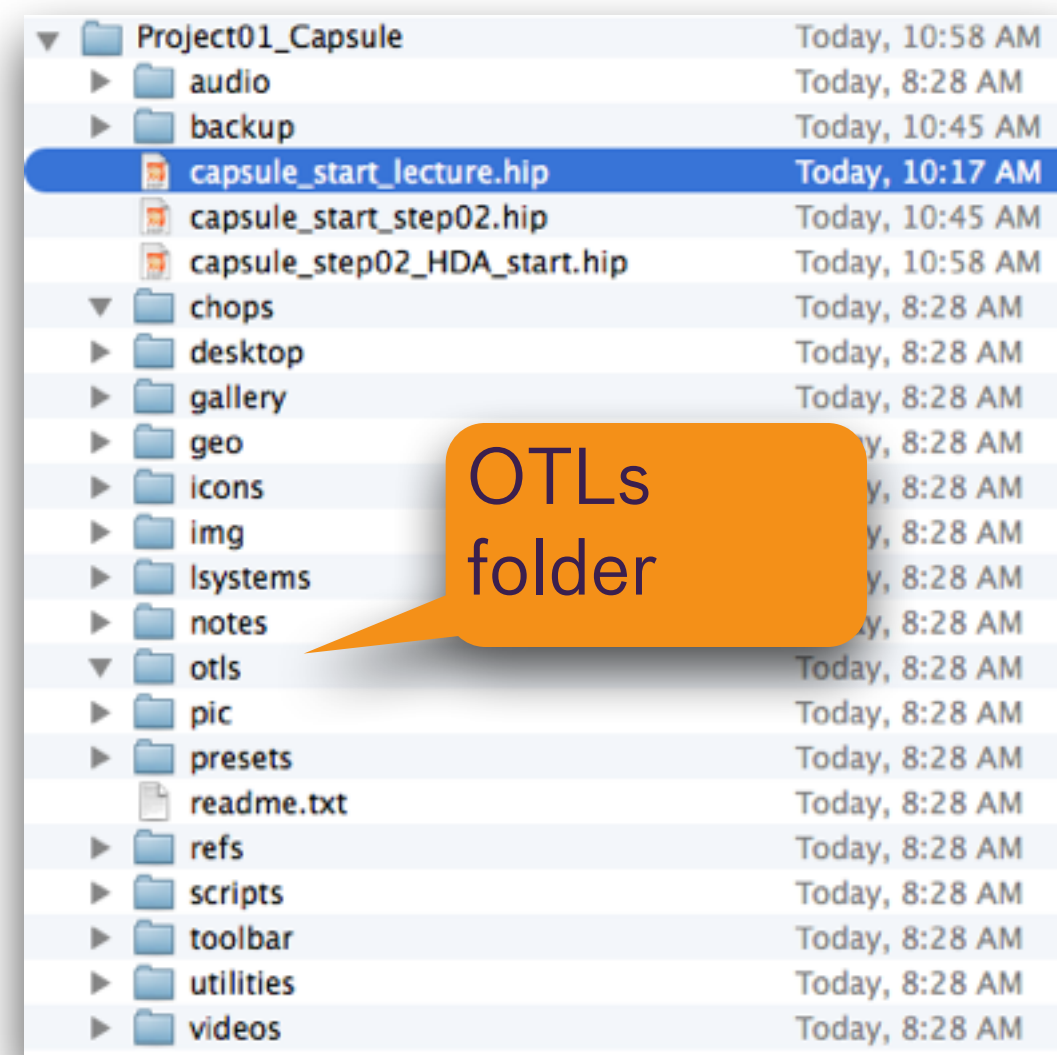
An OTL can exist as a file on disk or be embedded in a scene file.



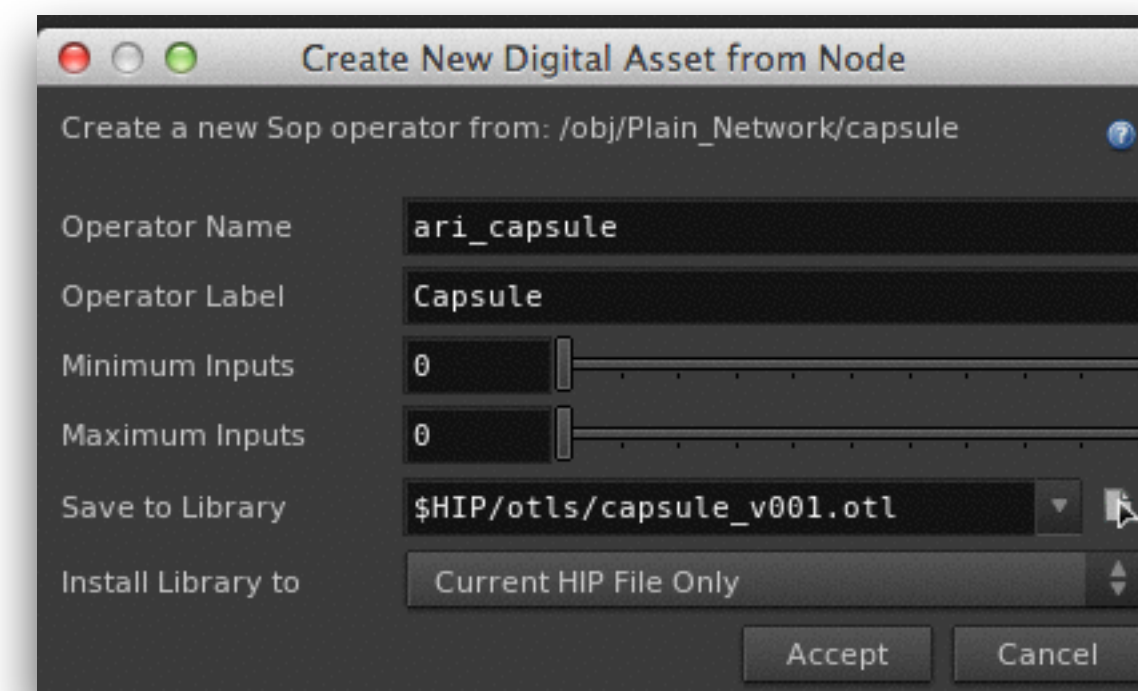
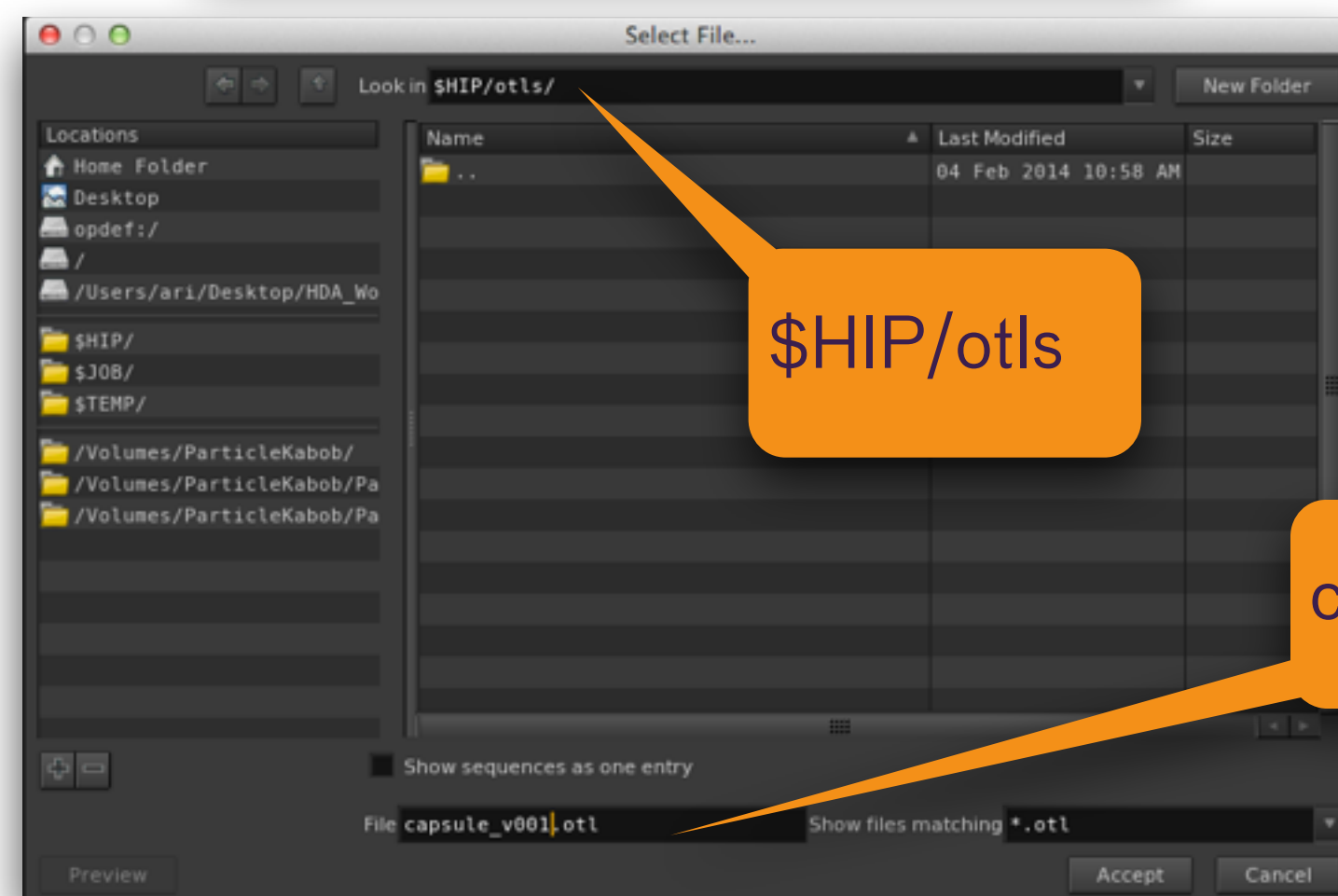
**An OTL can store
multiple HDAs.**

**While you can save a
HDA anywhere I like to
save it on the Project
Folder**

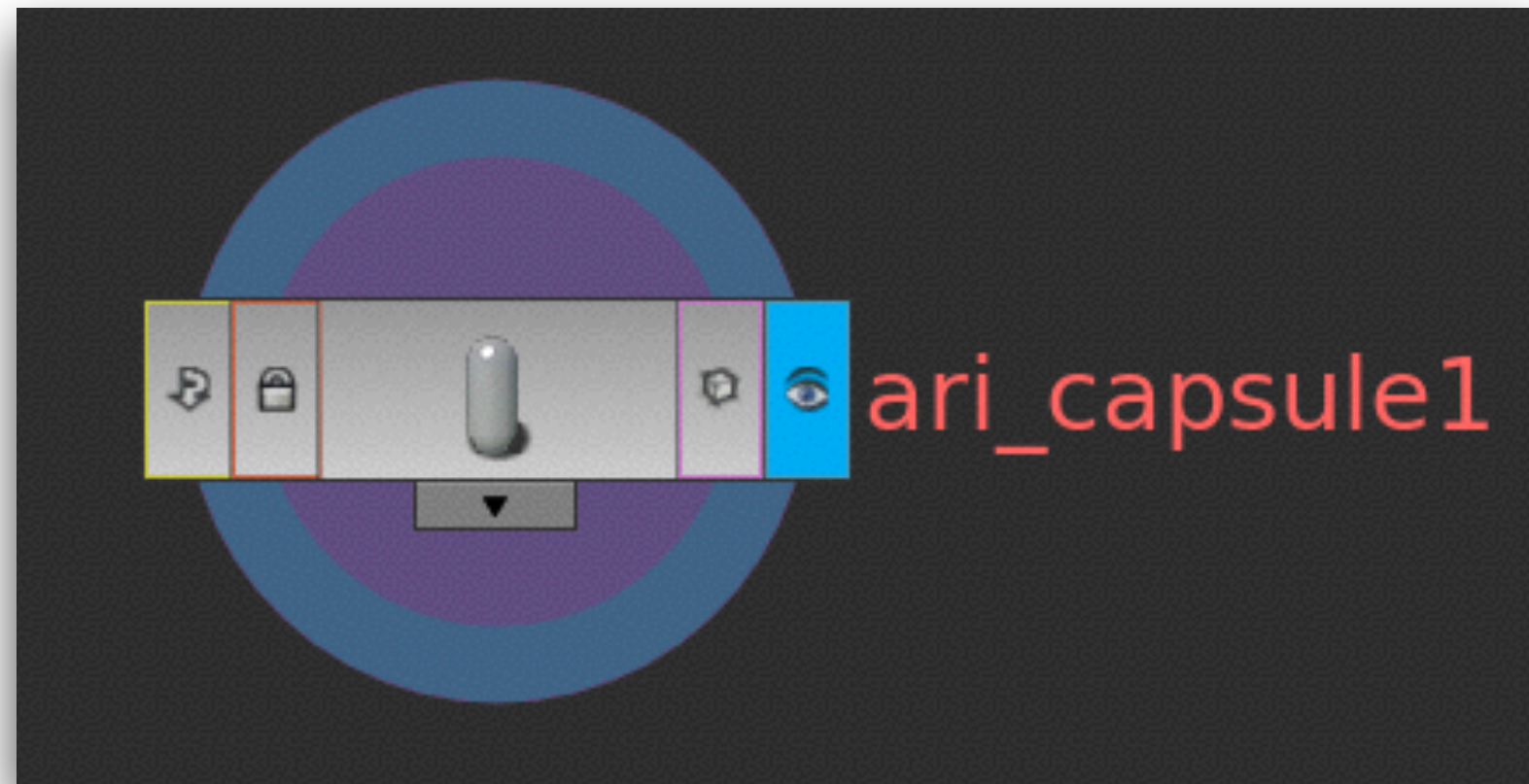
Project Folder Structure



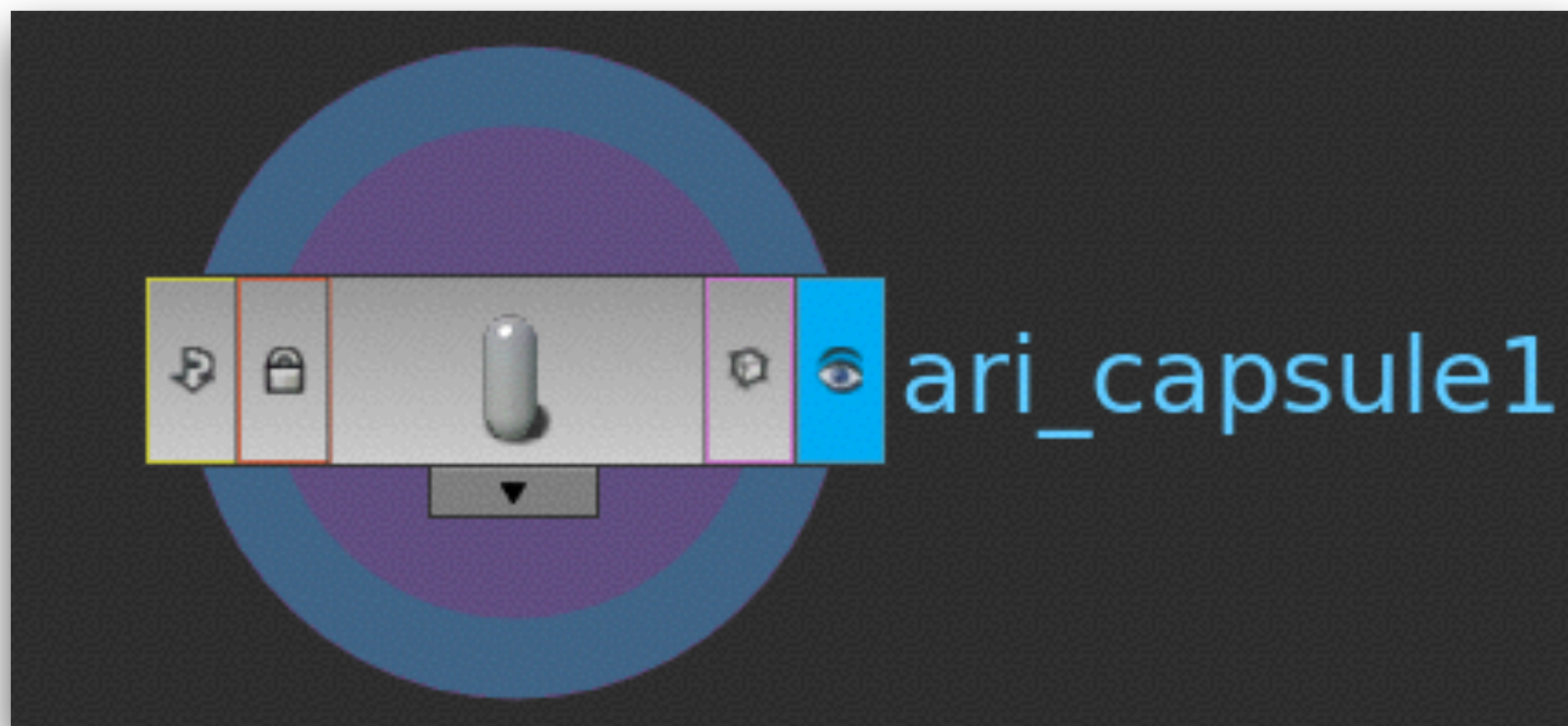
I usually create a project folder with the following folders inside it. Houdini will automatically search these folders when the Hip file is loaded. There is a “otls” folder. If you save your digital asset to this folder the HDA will automatically be installed when the file is loaded



The Colors of An Asset







Red - Editable Asset

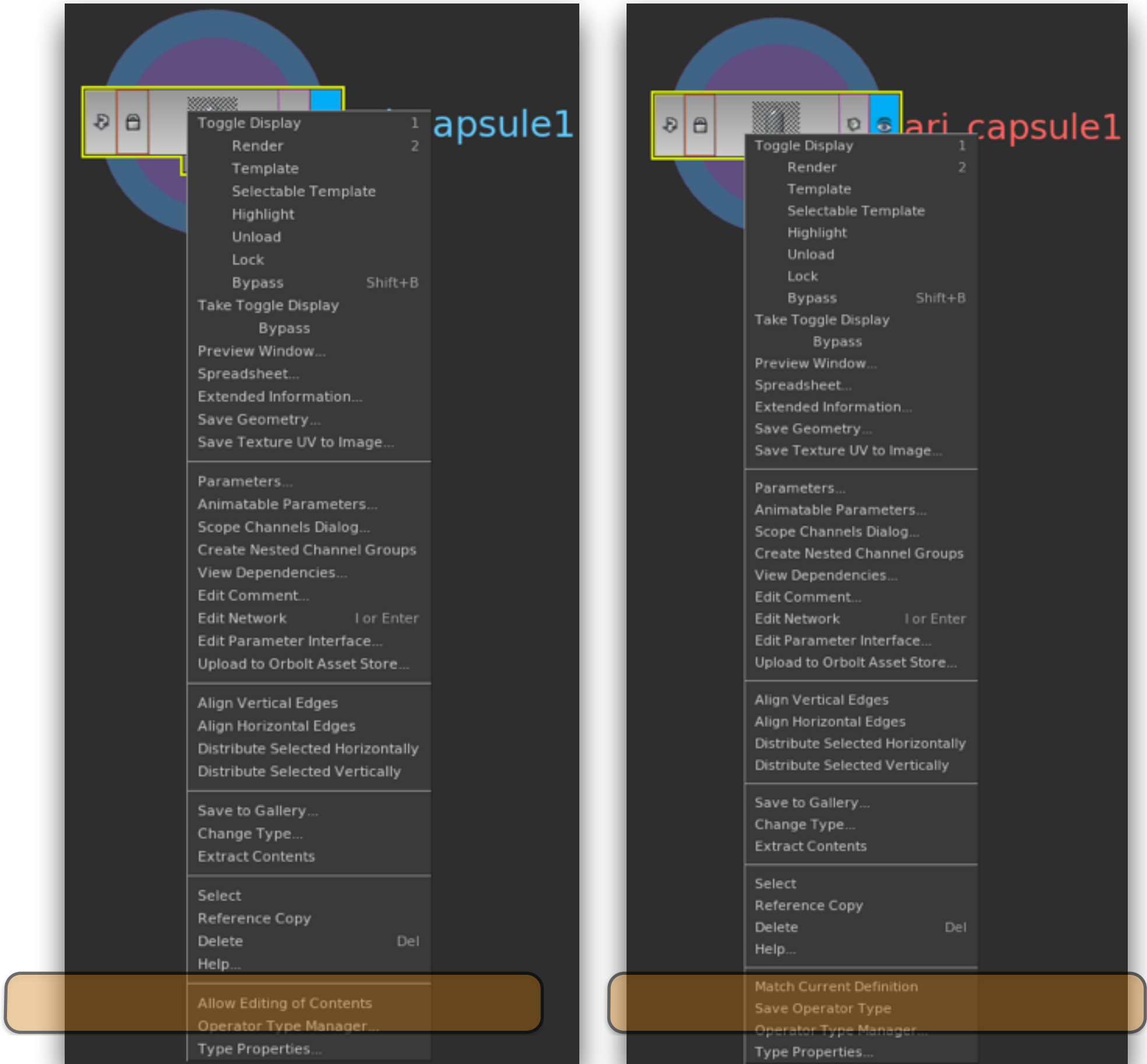


Blue - Locked Asset

Editable, Saved, Match Definition

Remember to Save Operator before Match Definition or your changes will be lost

To...	Do this
Unlock an asset to allow changes	<ul style="list-style-type: none">Press  on a node instance of the asset and choose Allow Editing of Contents. <p>Assets that are unlocked have their name printed in <i>red</i>.</p> <p>In a production setting, generally only technical directors or supervisors should open up digital assets for editing.</p>
Lock a digital asset	<ul style="list-style-type: none">Press  on a node instance of the asset and choose Match Current Definition. <p>Assets that are locked to match the library definition have their name printed in <i>blue</i>.</p>
Open an asset's type properties window	<ul style="list-style-type: none">Press  on a node instance of the asset type and choose Type Properties.In the operator type manager, press  on a library asset and choose Type Properties.
Save changes in the type properties window to the asset definition	<ul style="list-style-type: none">In the type properties window, click Apply

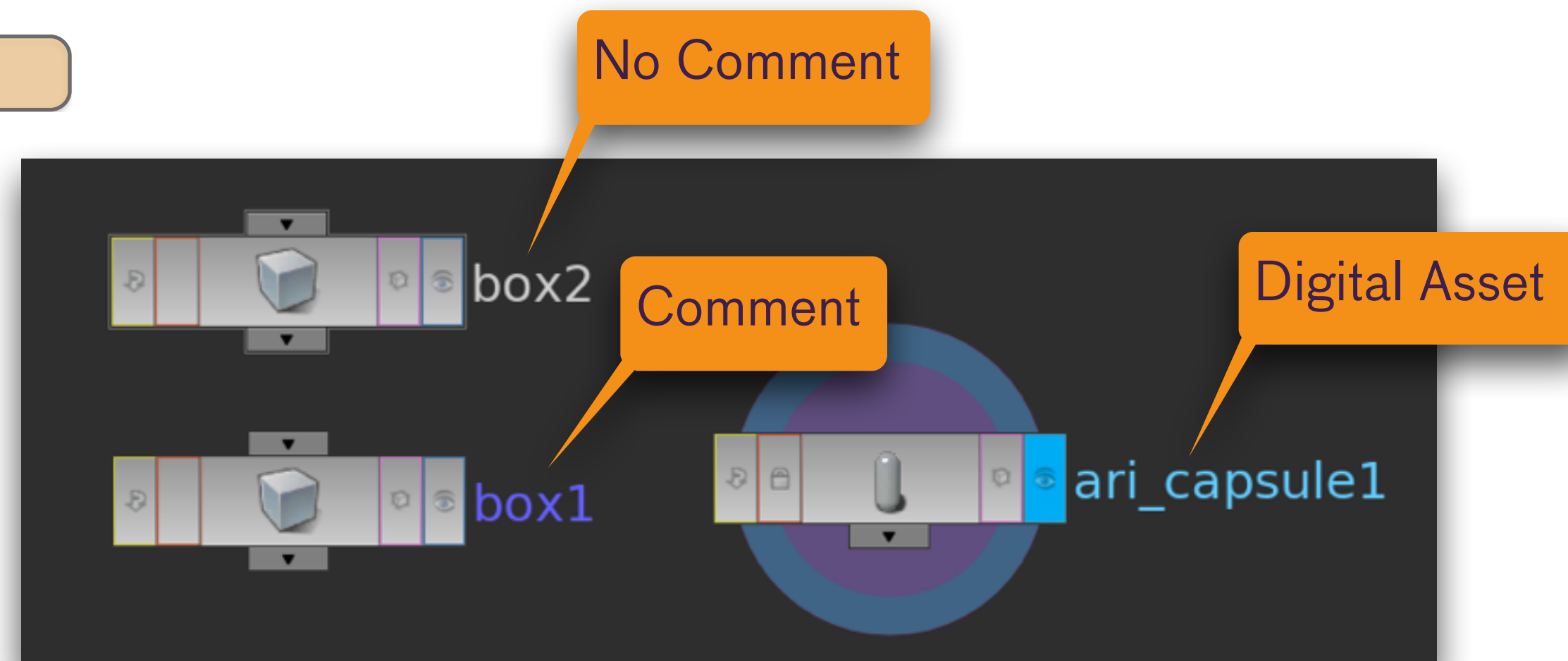
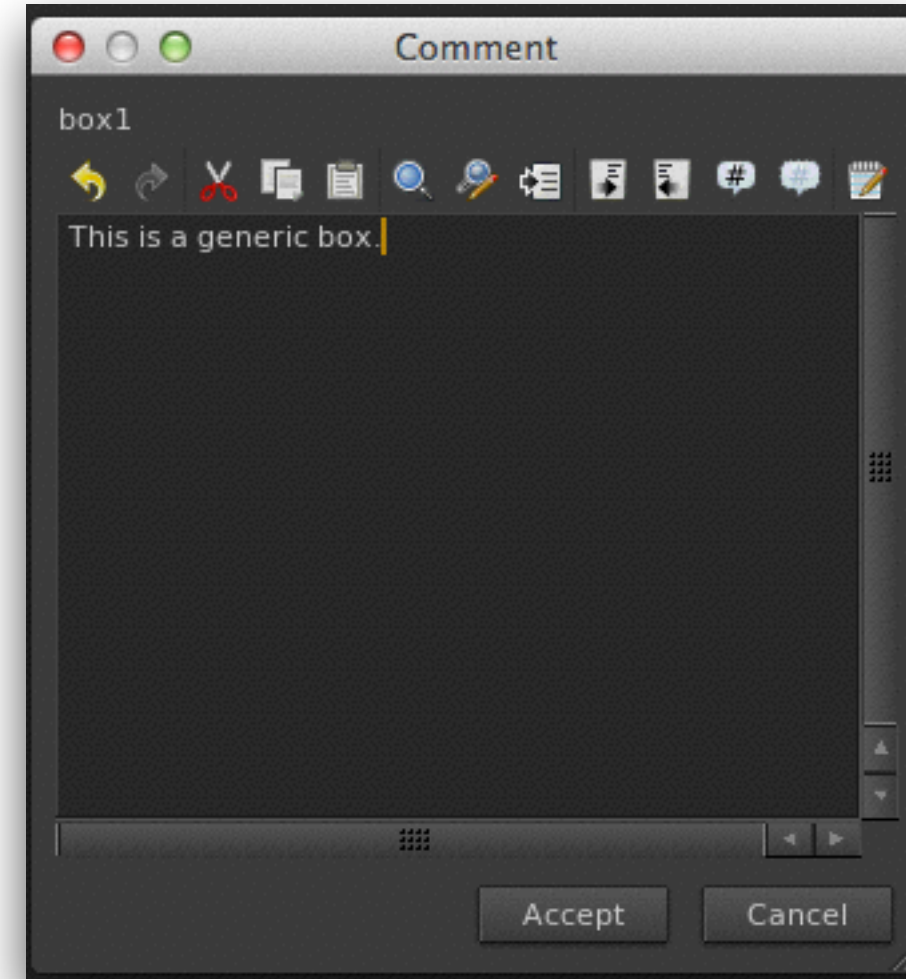
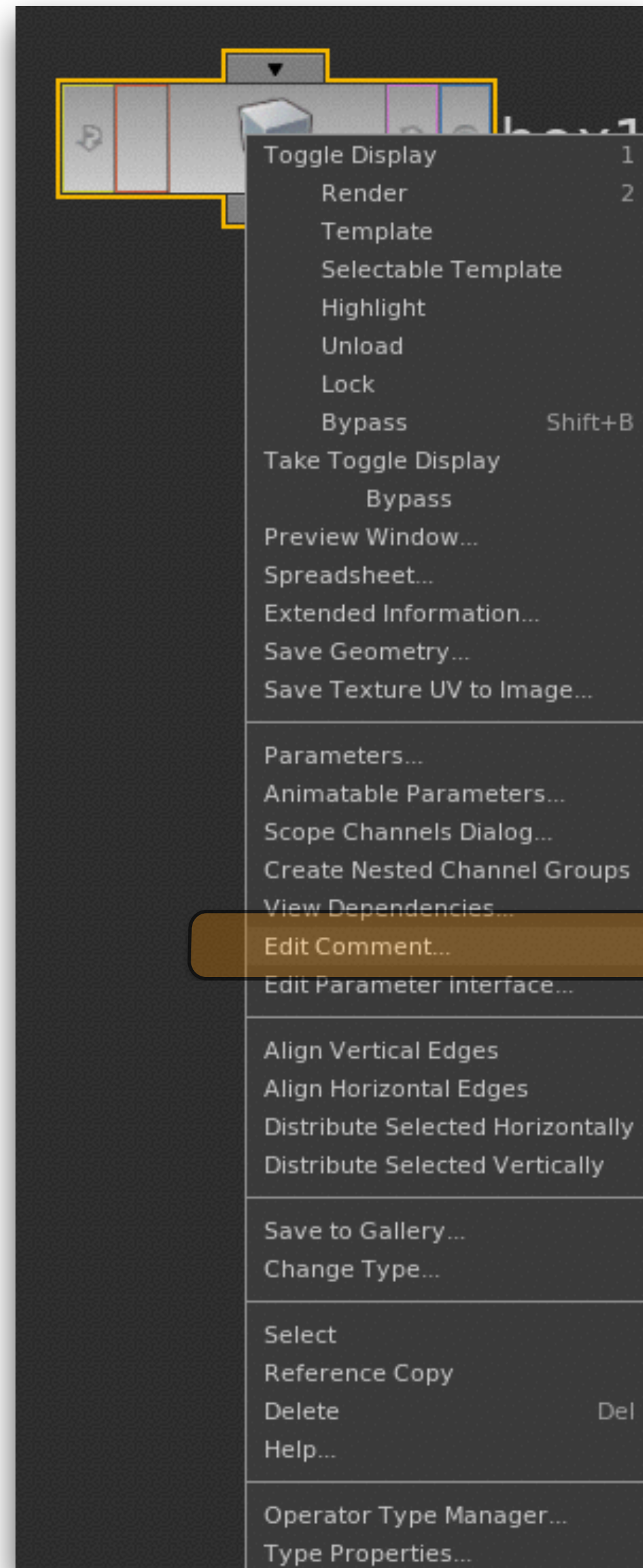


A Color Gotcha... Comments

You can add a comment to any node. Here I am adding a comment to a Box SOP

Once you add a comment the label of the node turns to dark blue

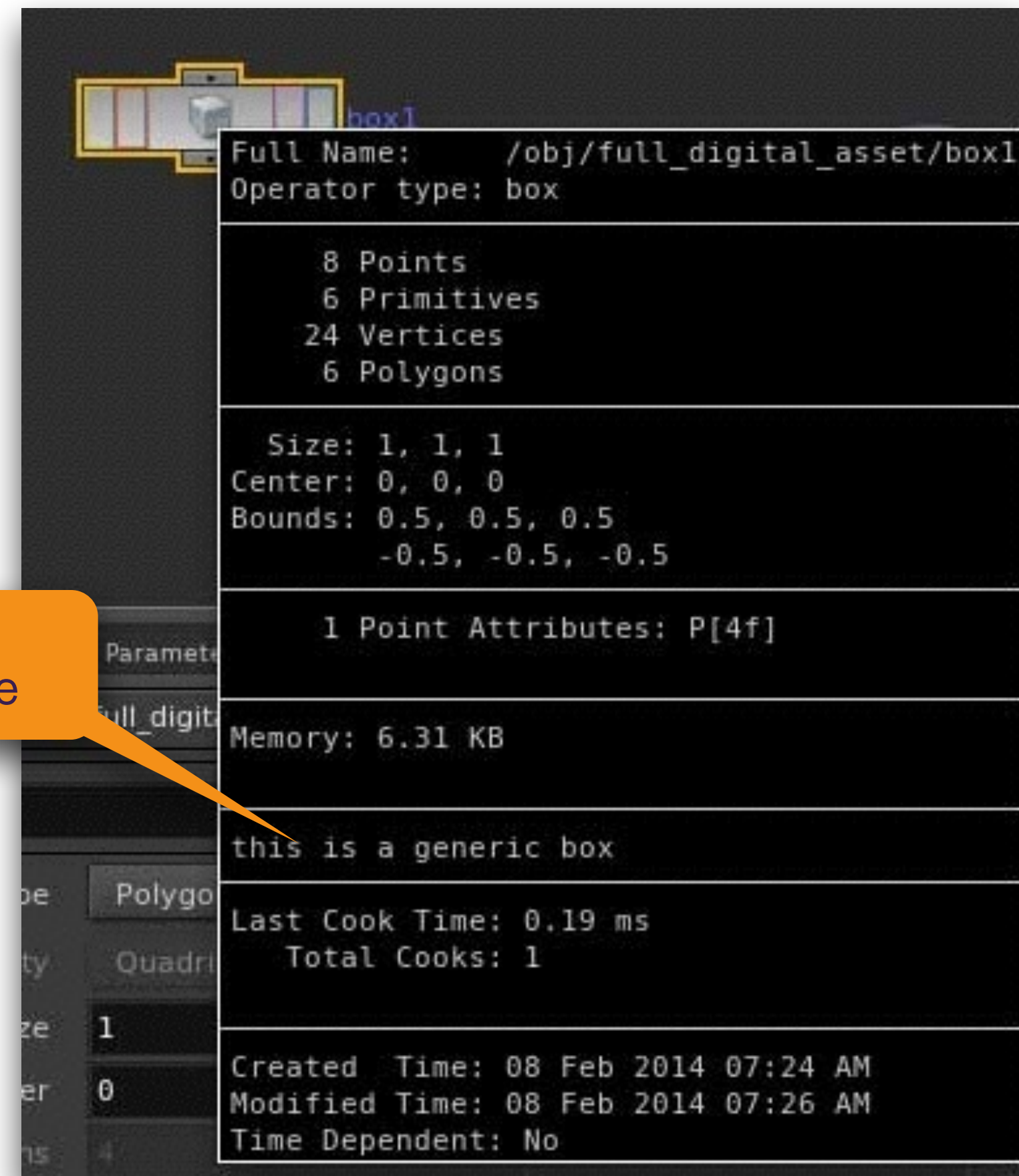
Do not get confused between a comment (dark blue) and a locked asset (light blue)



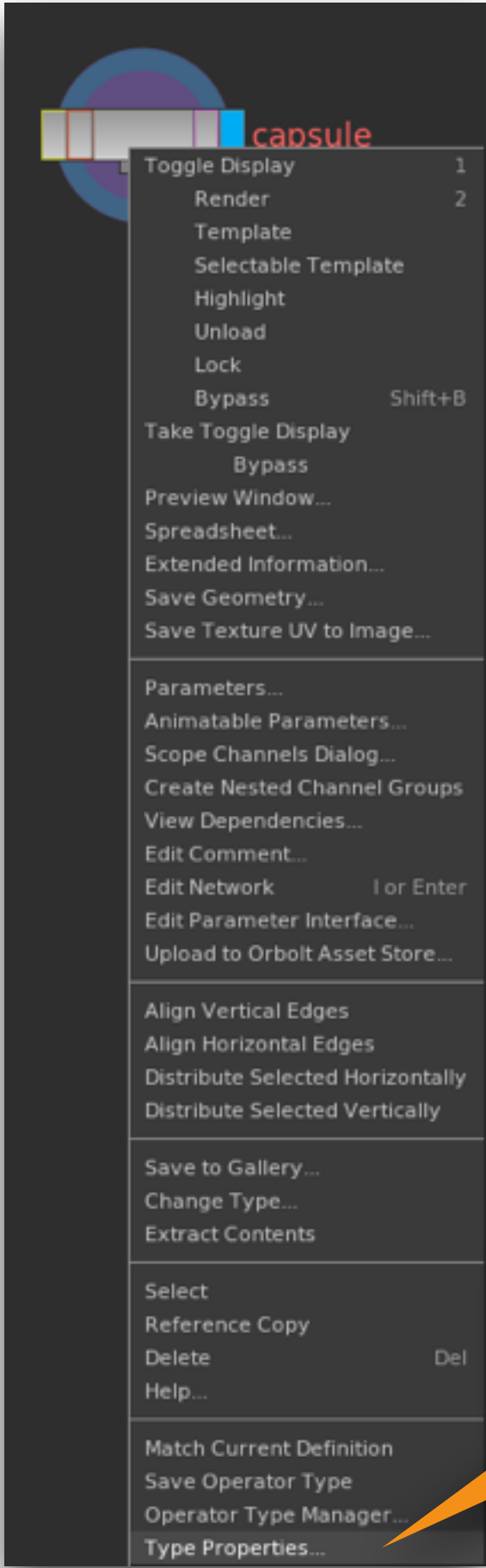
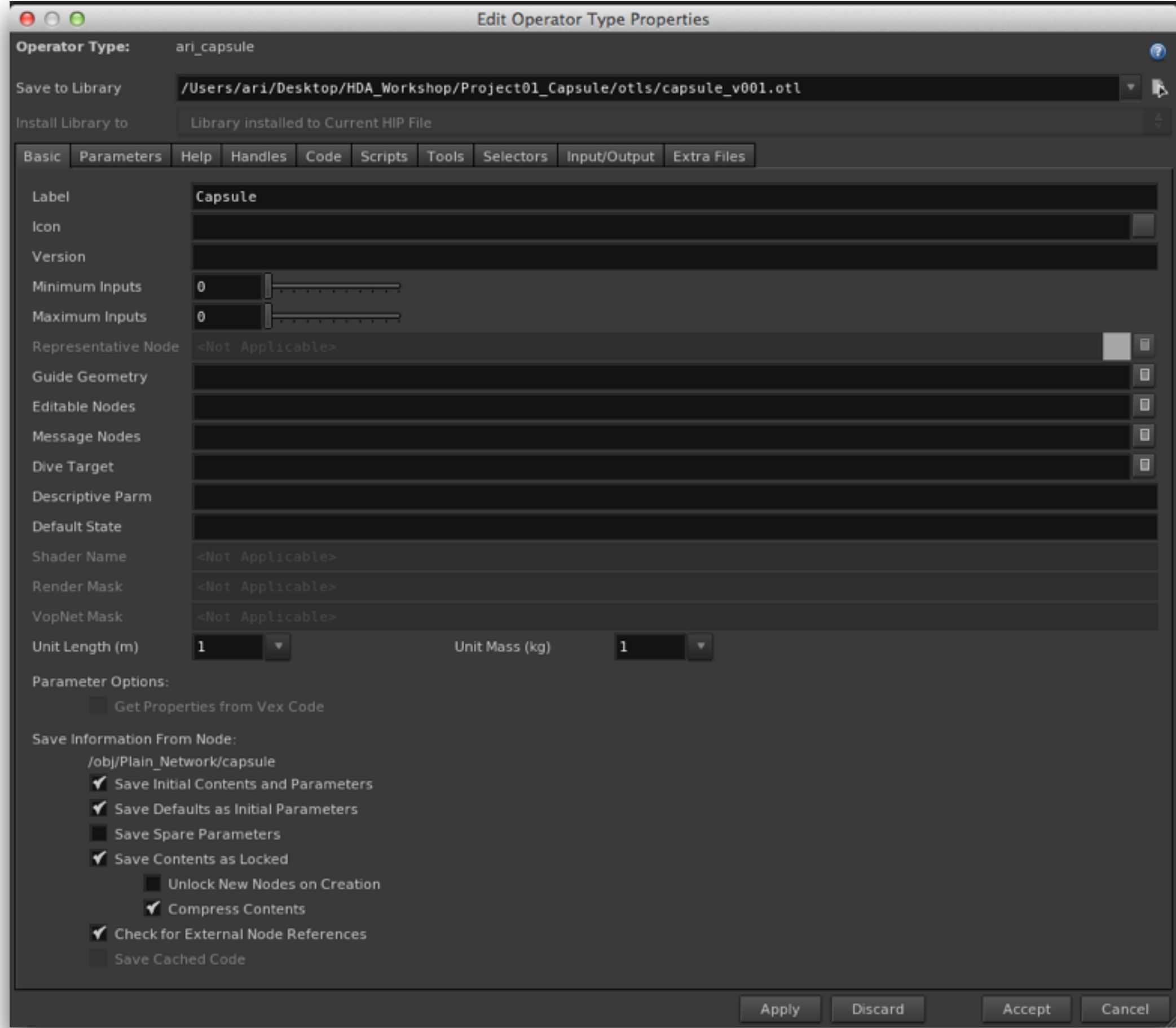
Where Do Comments Show Up?

Middle Click on the Box SOP

Comment
Appears Here



Edit Operator Type Properties



You can always call up the "Edit Type Properties" window

Here is where you will spend most of your time assetizing the HDA

Some Best Practices. More to come...

If the Digital Asset you are creating is similar to another Digital Asset or Node in Houdini use the same Parameter Labels

Label your nodes descriptive names

Break up the User Interface into Logical Areas

Lock Parameters that you or other TDs do not need to change

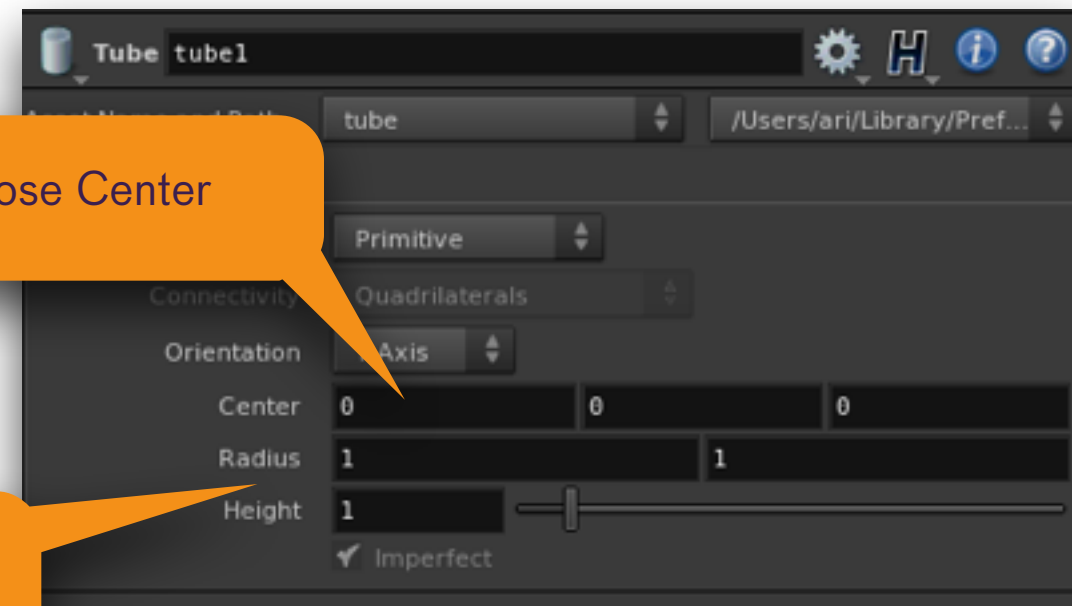
Make the Asset Flexible so it is not a One Off

Test, Test, Test... Before giving it to others

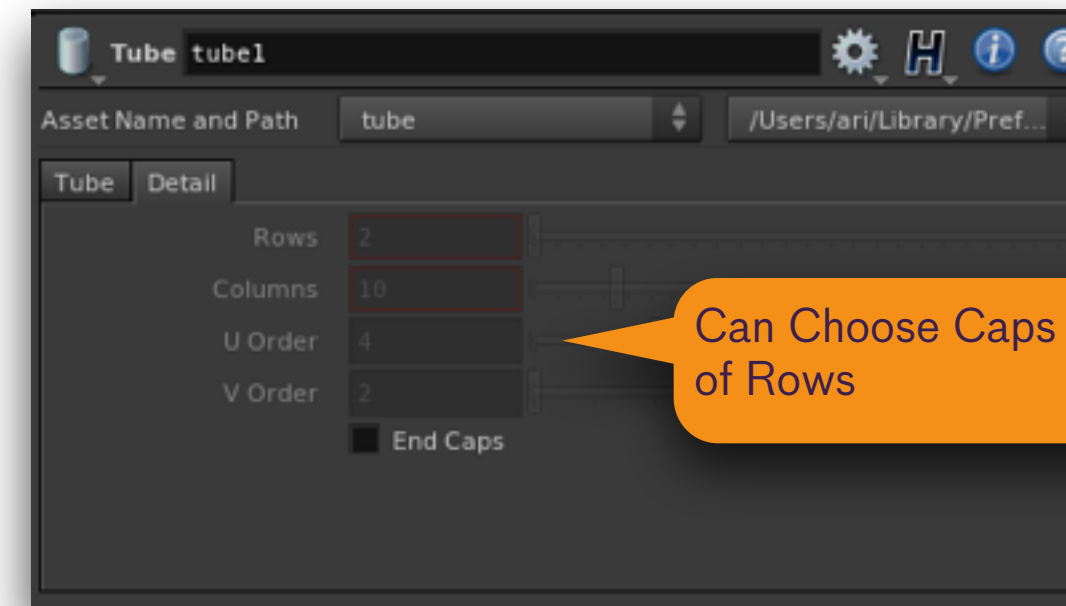
Examining the Tube Asset

Can choose Center

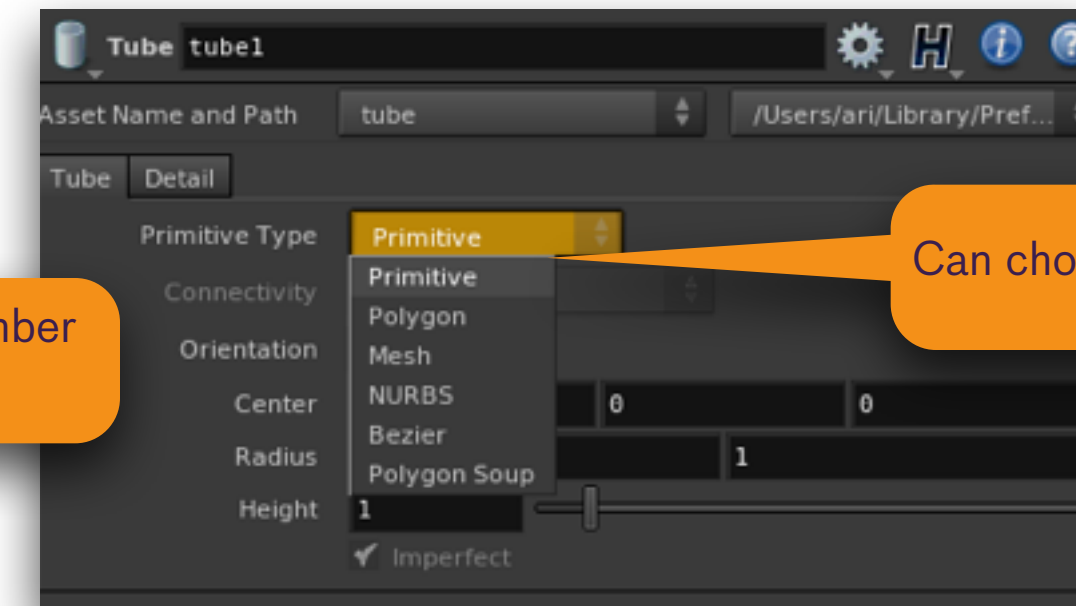
Can Choose Radius and Height



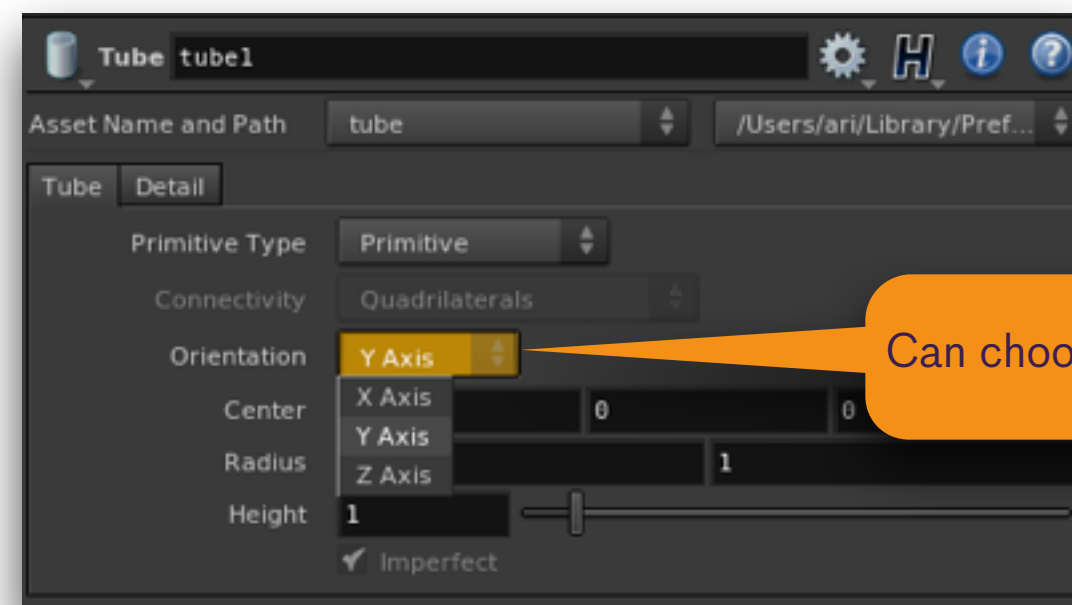
Can Choose Caps and Number of Rows



Can choose Prim Type



Can choose Orientation



“If the Digital Asset you are creating is similar to another Digital Asset or Node in Houdini use the same Parameter Labels”

How Do I Load a Digital Asset?

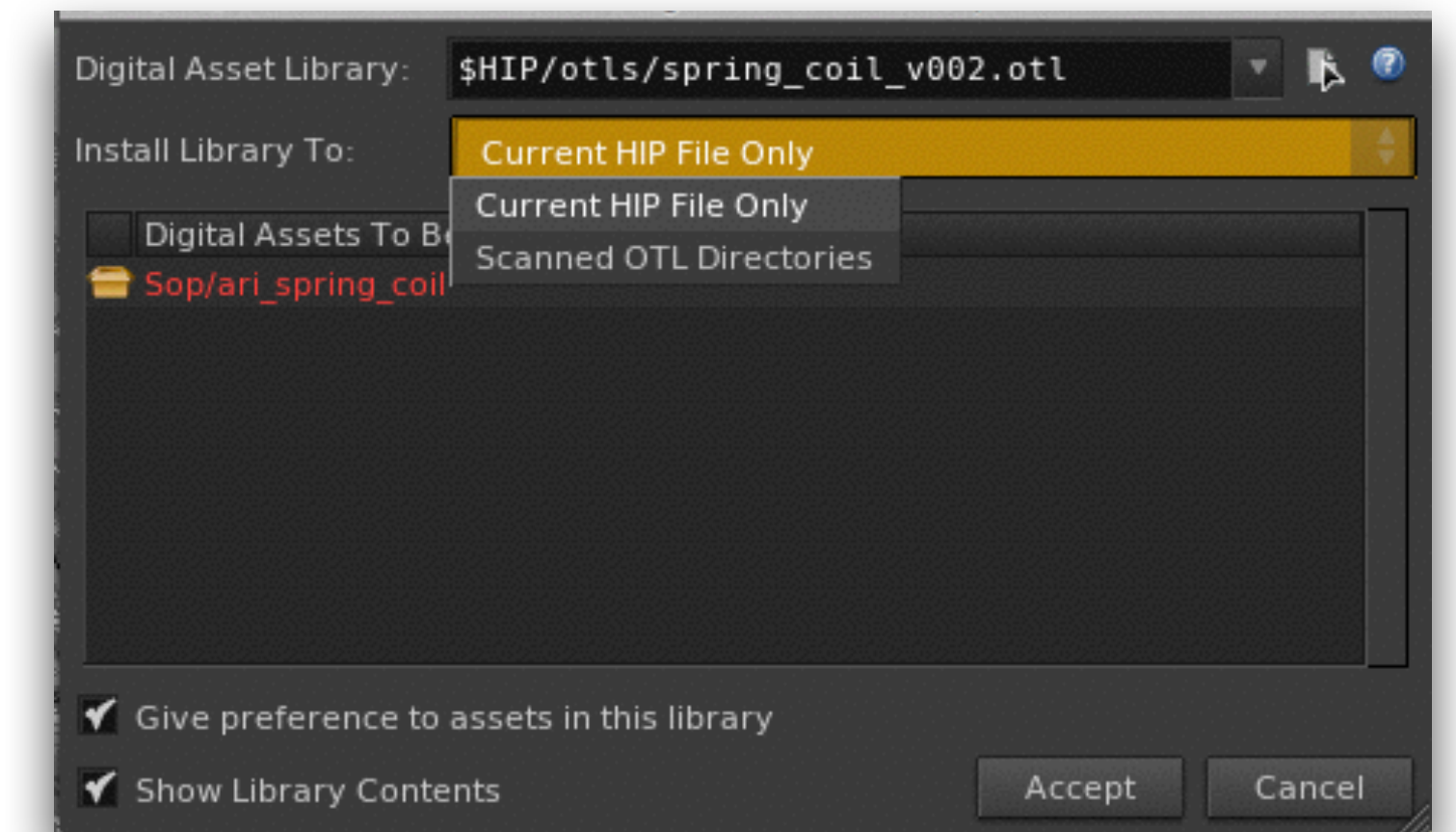
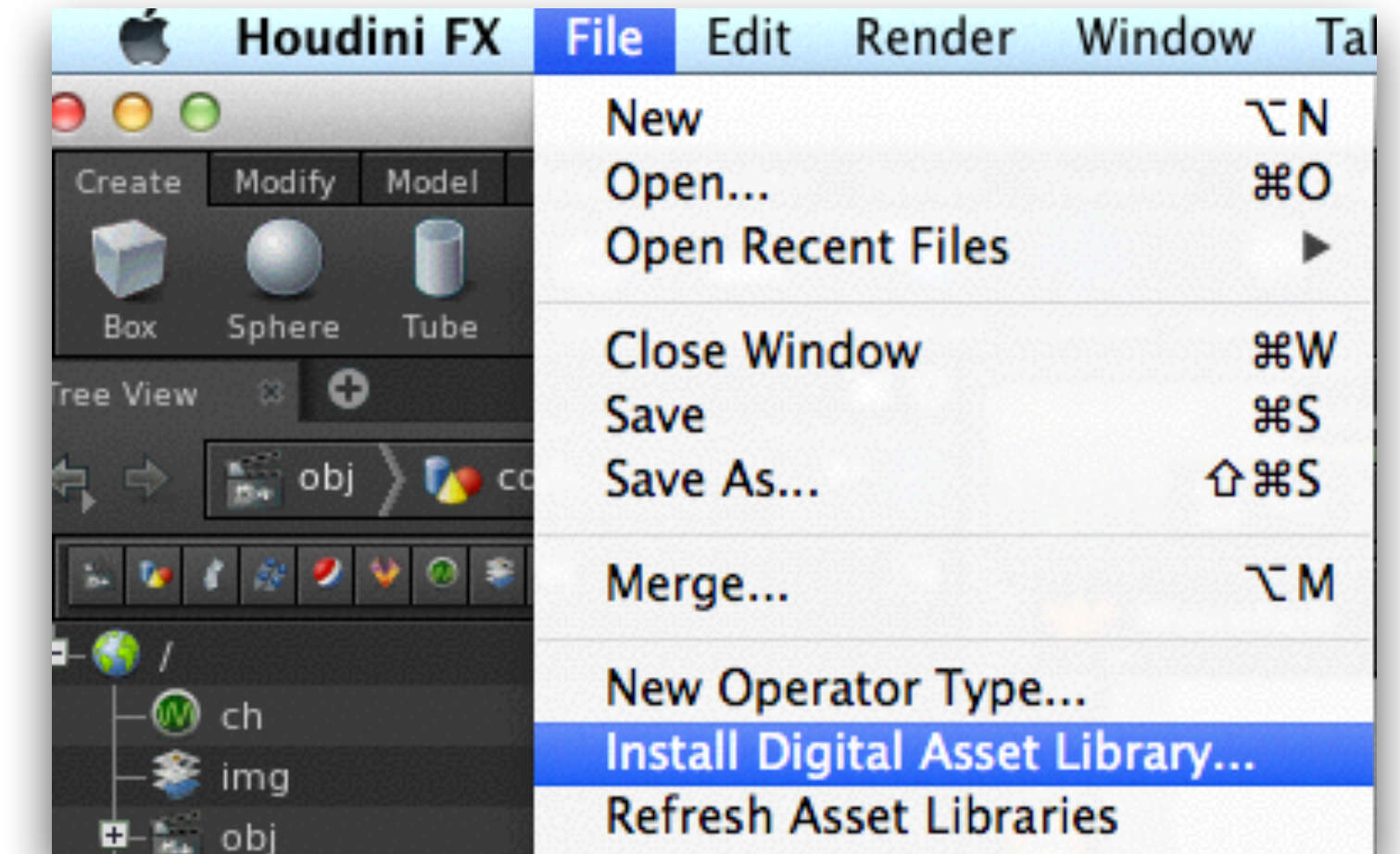
If I create a new Scene file (.hip) I might have to manually install the Digital Asset.

Choose File > Install Digital Asset Library.

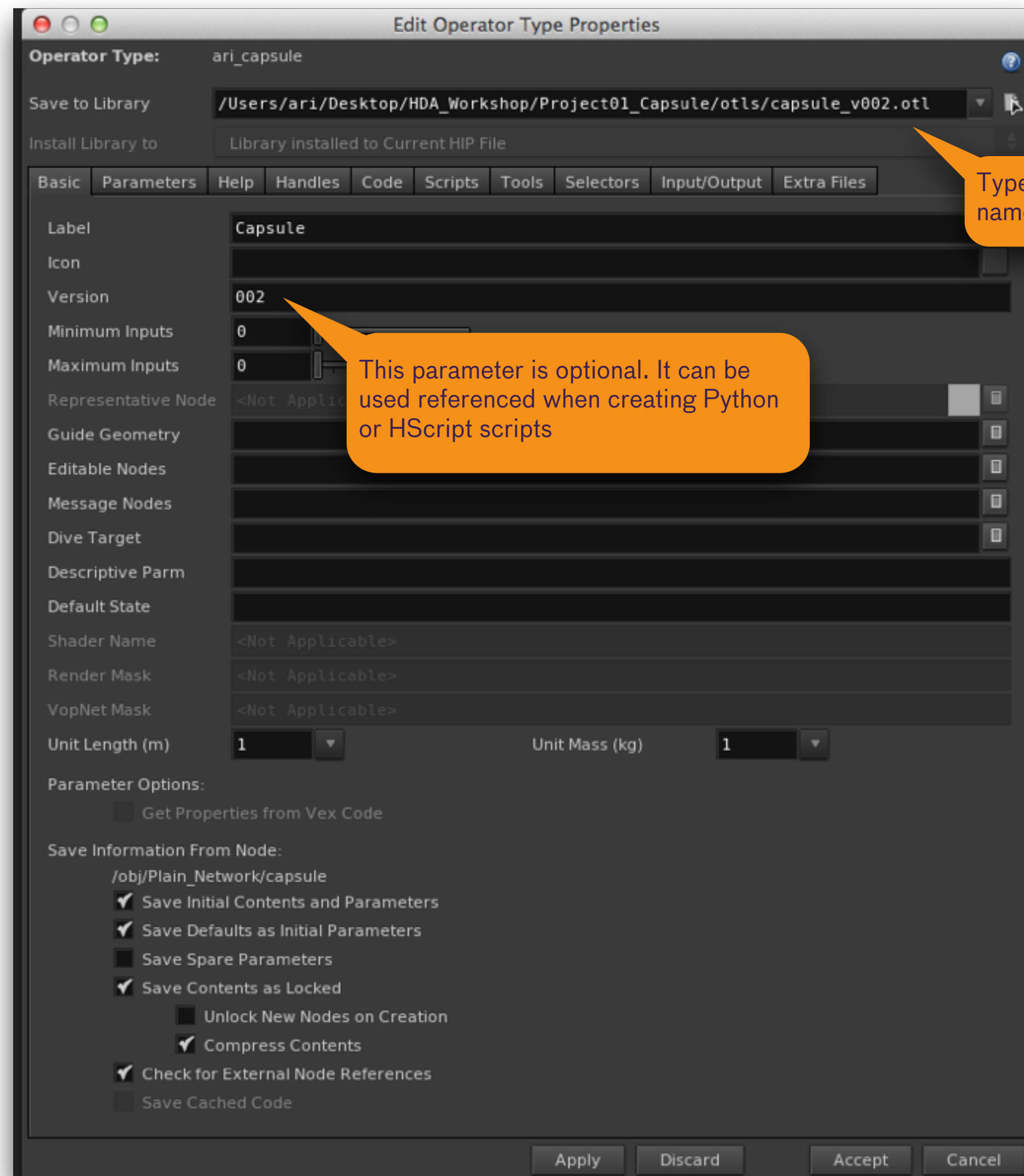
Select the digital asset file you want to install.

Use the Install Library To option to choose where you want the type library to be available.

As you progress in making your Digital Asset You can save new versions...



How Do I Save New Versions of an HDA?



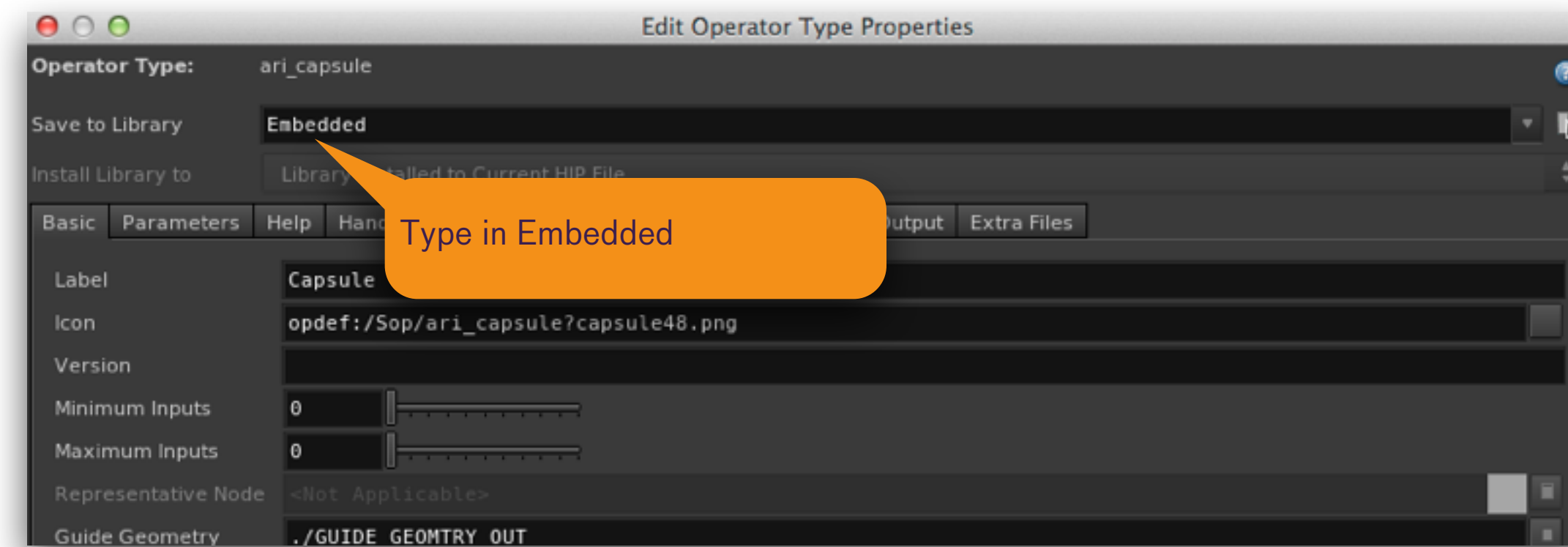
Open the Edit Operator Type Library

In the top parameter “Save to Library” enter a new version or new name

Click “Apply” or “Accept” for a new version to be saved

Optionally you can also add a Version String in the Version parameter. This is only used for reference in scripts

How Do I Save New Versions of an HDA? (cont.)



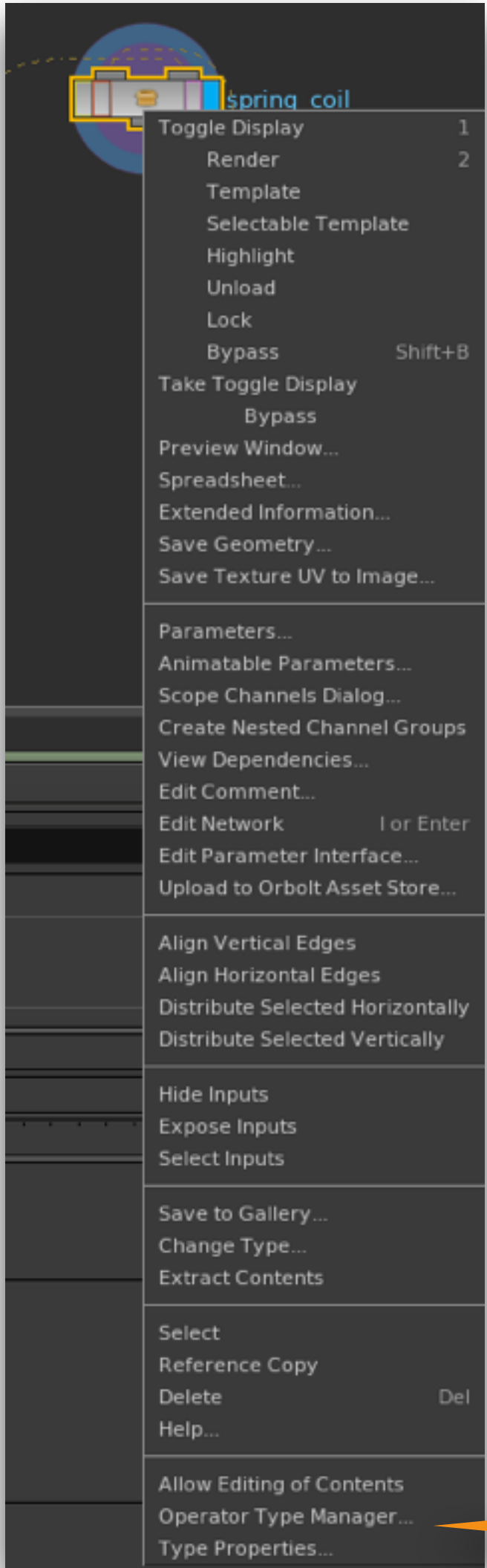
Another way to save an Asset is to Embed the Asset into the Hip file

This makes the project very portable at the expense of increasing the memory footprint of the saved file

To embed an asset all you have to do is:

Save to Library - Type “Embedded” in the parameter

How Do I Choose Which Version on the Asset to Use?



The Operator Type Manager allows the user to switch which version of the Asset is active in the network

Right Click on the Asset and Select “Operator Type Manager...”

Find the Asset and Version you want to select and RIGHT CLICK

Select “Use This Definition”

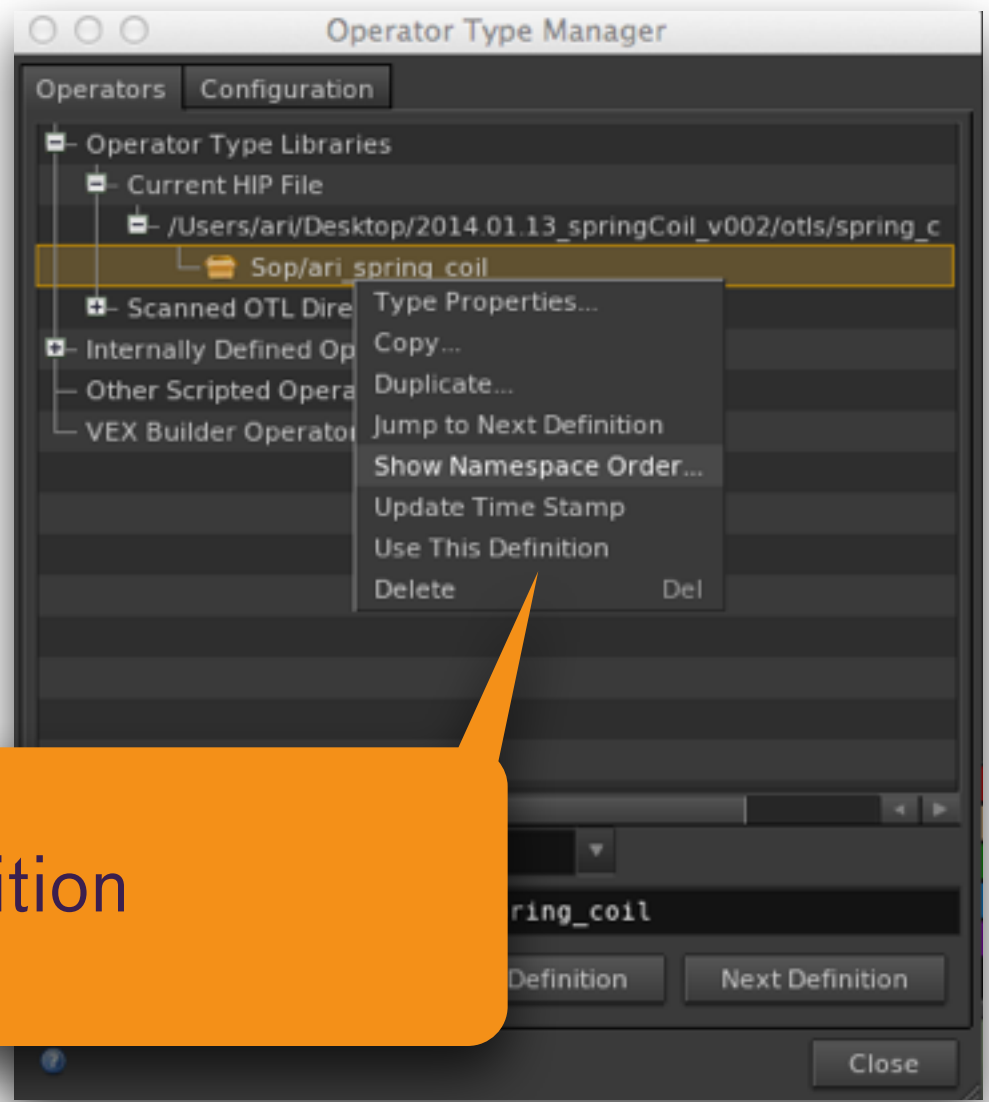
Colors of definition names

Green - current definition is being used for that operator type.

Yellow - current definition for that operator type, but there is a more recent definition available in another operator type library

Red - not the current definition for the specified operator

Operator Type Manager

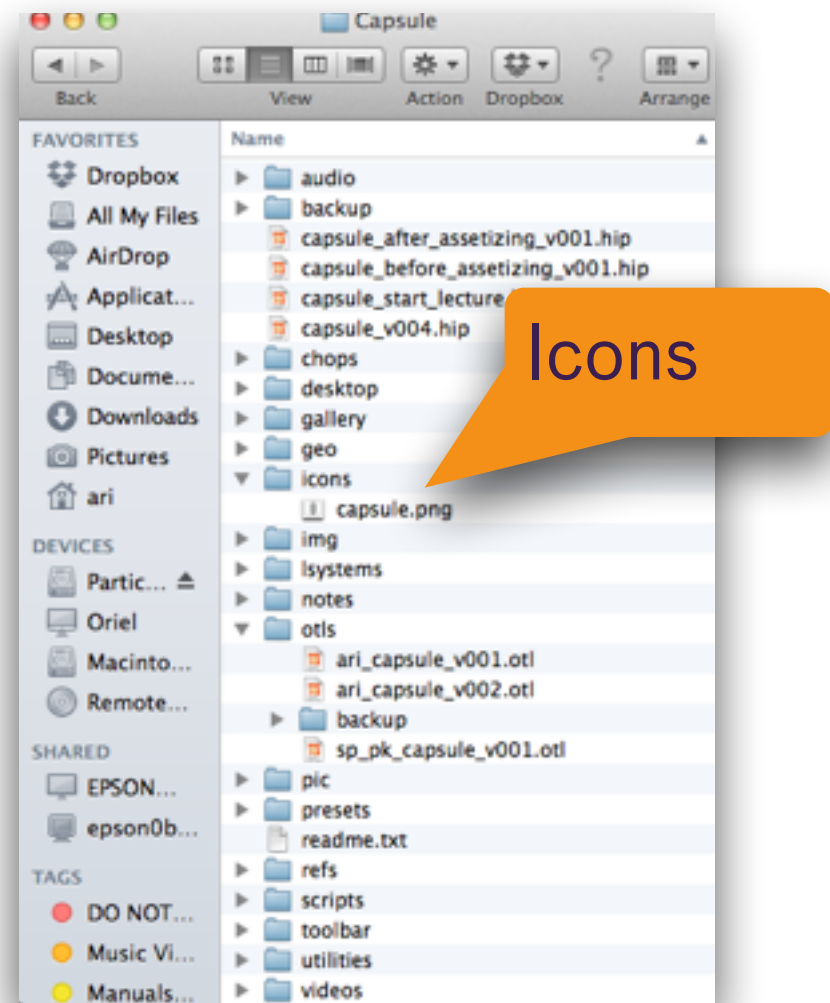


Use This Definition



Creating Icons for Shelf Tools and Nodes

Creating an Icon and Storing it to Drive



Any jpg, png, svg, or pic can be used to create an icon for your Asset

Any size will work, but it is recommended to use a square size. 48 pixels x 48 pixels

To store an asset to your drive I recommend creating an “icons” folder in the folder that is holding your hip file.

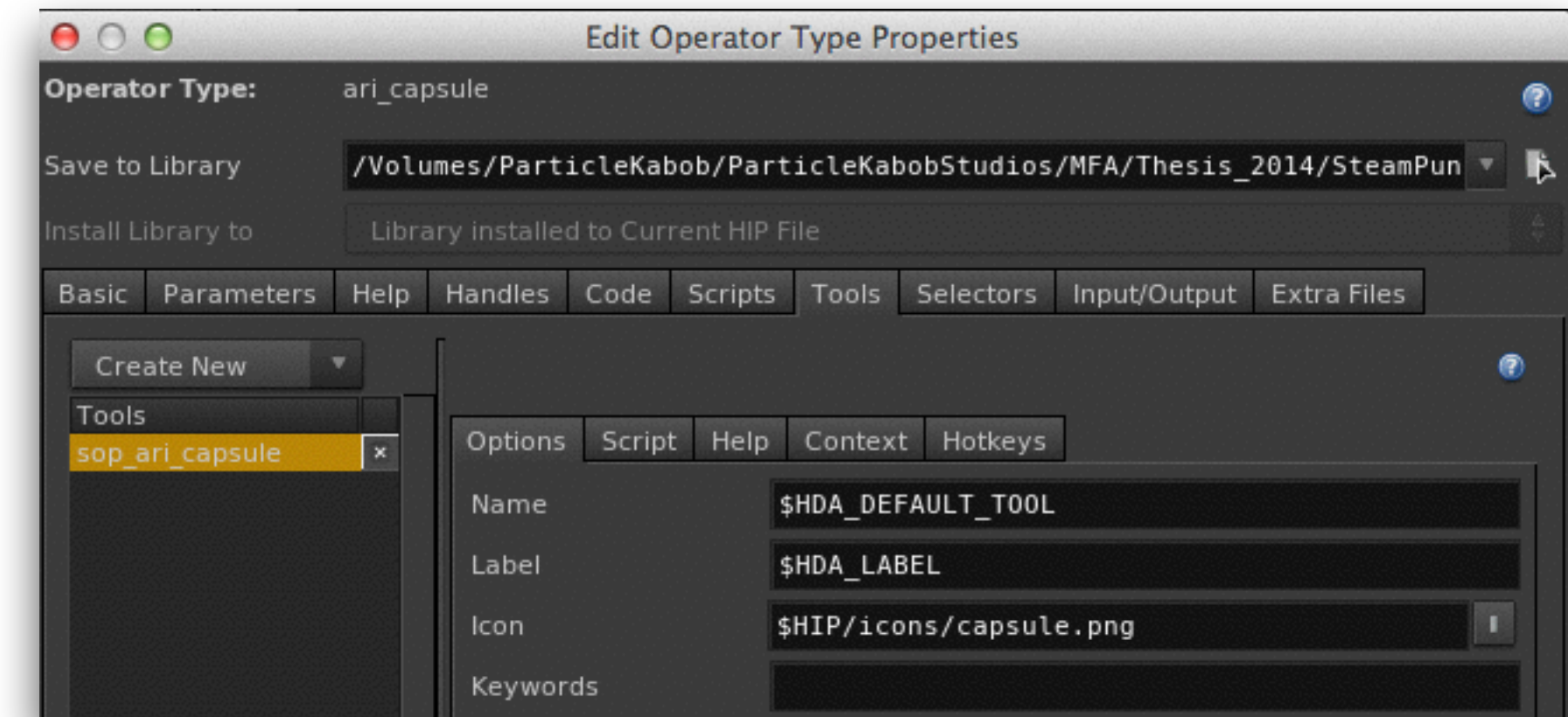
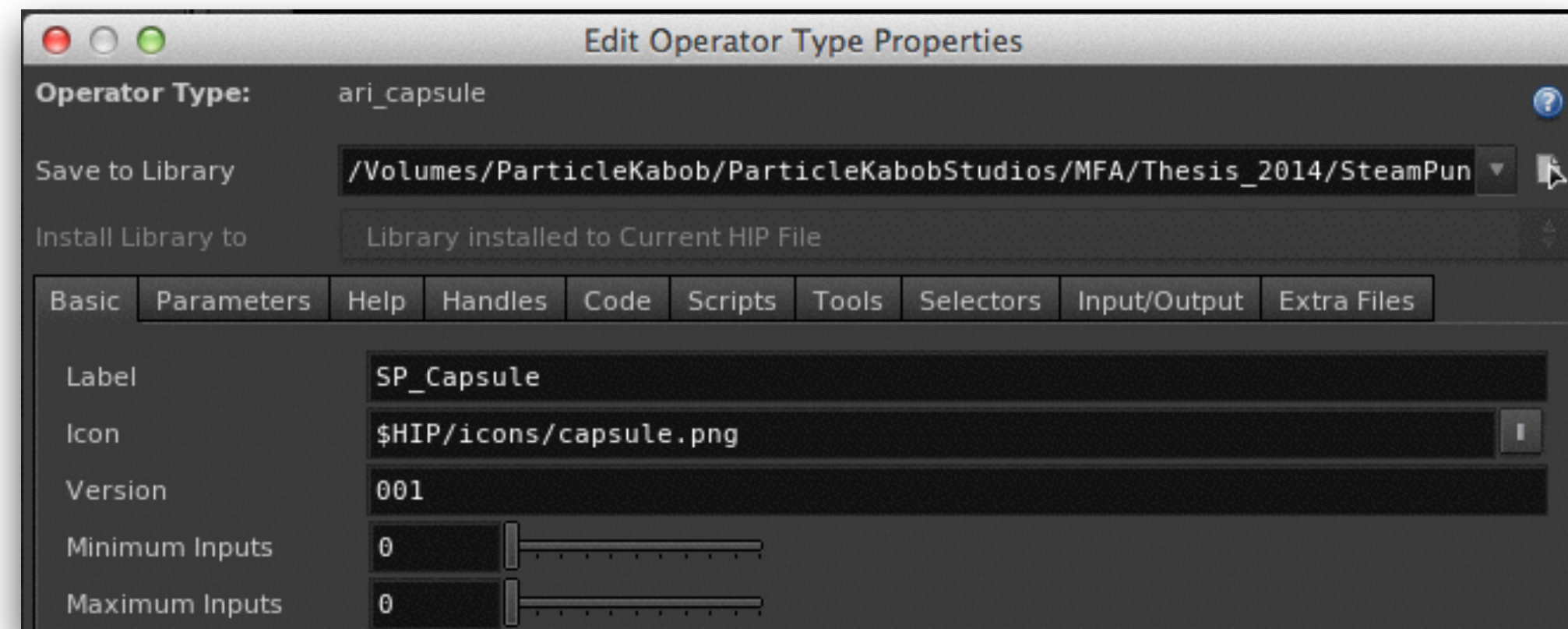
Store you image file in the icons folder

To read the image into the asset there are two locations for the image to be read

Basic Tab - This is the icon to be used for the shelf tool

Tools—>Options Tab - This is the icon to be used for Tab menus and nodes

In the Tools—Options Tab point to the icon. `$HIP/icons/capsule.png`

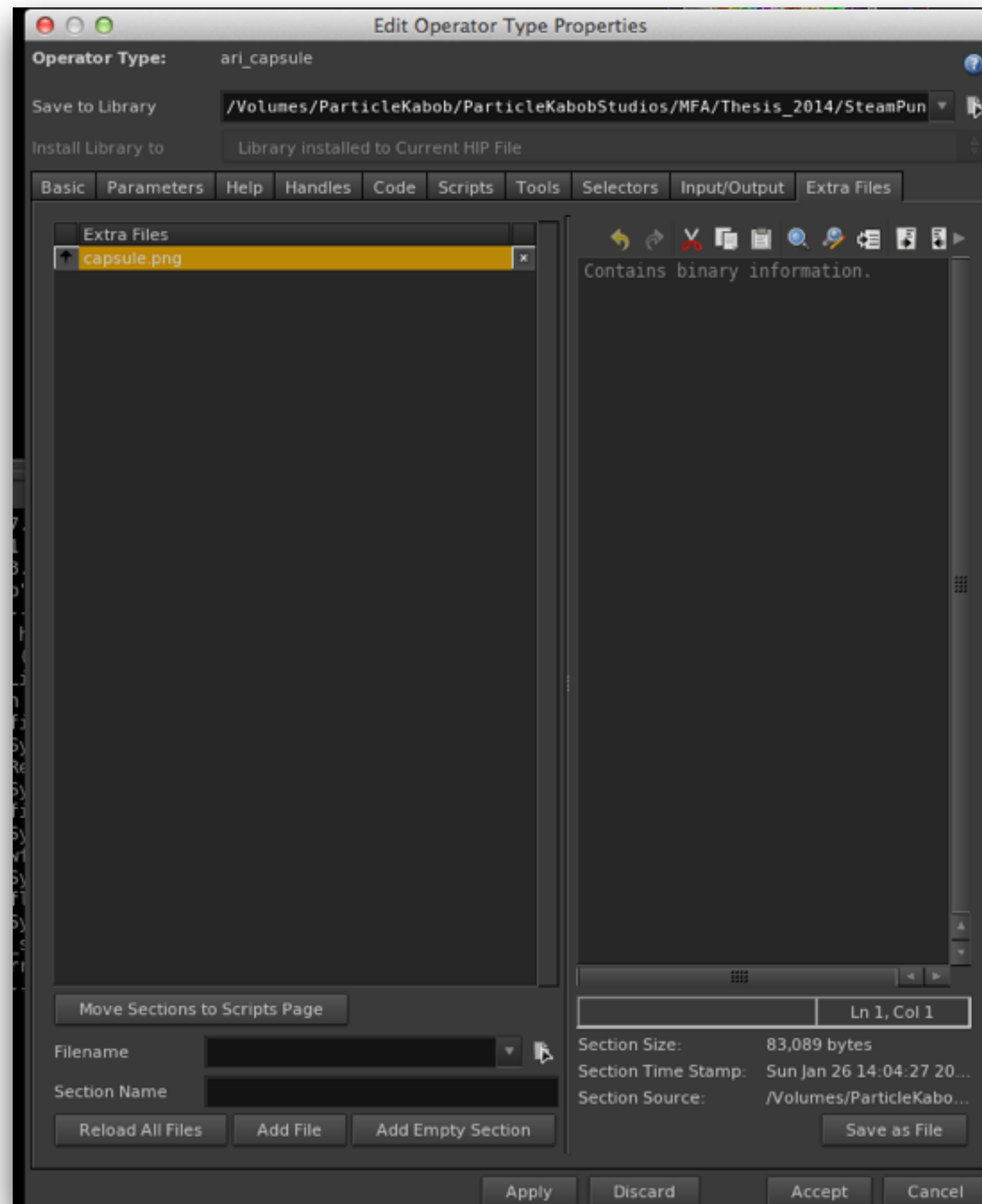


Embedding the Icon into the Asset

By embedding the icon into the digital asset you make the asset more portable because there are no image dependencies

To do this we will use the Extras Files Tab

The Extra Files Tab allows you to embed all sorts of files including image files, pdfs, text, and code



Using Extras Files

In the Extra Files Tab at the Bottom

Create a Section Name - icons

File Name - \$HIP/icons/capsule.png

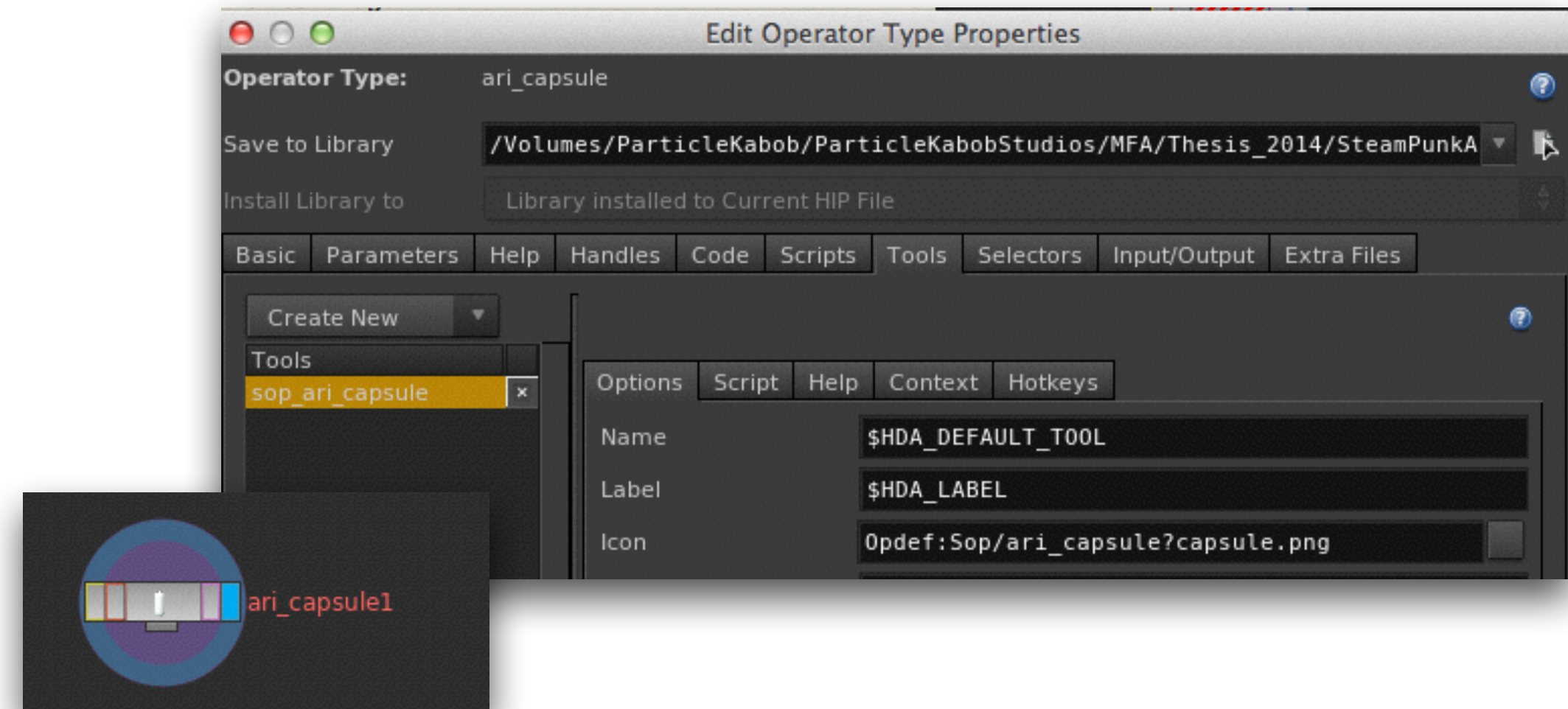
Click - Add File

Now in the Tools Tab

Icon - Opdef:Sop/ari_capsule?capsule.png

We can also now specify an icon for the Desktop

opdef:/Sop/ari_capsule?IconImage



Opdef & Oplib

Accessing embedded files

Once you have embedded files into the operator type definition, you can access these embedded files from many places within Houdini. Geometry or channel files can be accessed from File SOPs or File CHOPs. Image files can be used as texture map files specified in VEX SHOPs. Script files can be accessed from the textport or parameter callbacks using the source command.

To access one of these embedded files, wherever a file name is called for, use the following:

```
opdef:/Network_type/asset_name?section
```

For example:

```
opdef:/Shop/v_clay?DialogScript
```

To refer to the current operator, use

```
opdef:..?section
```

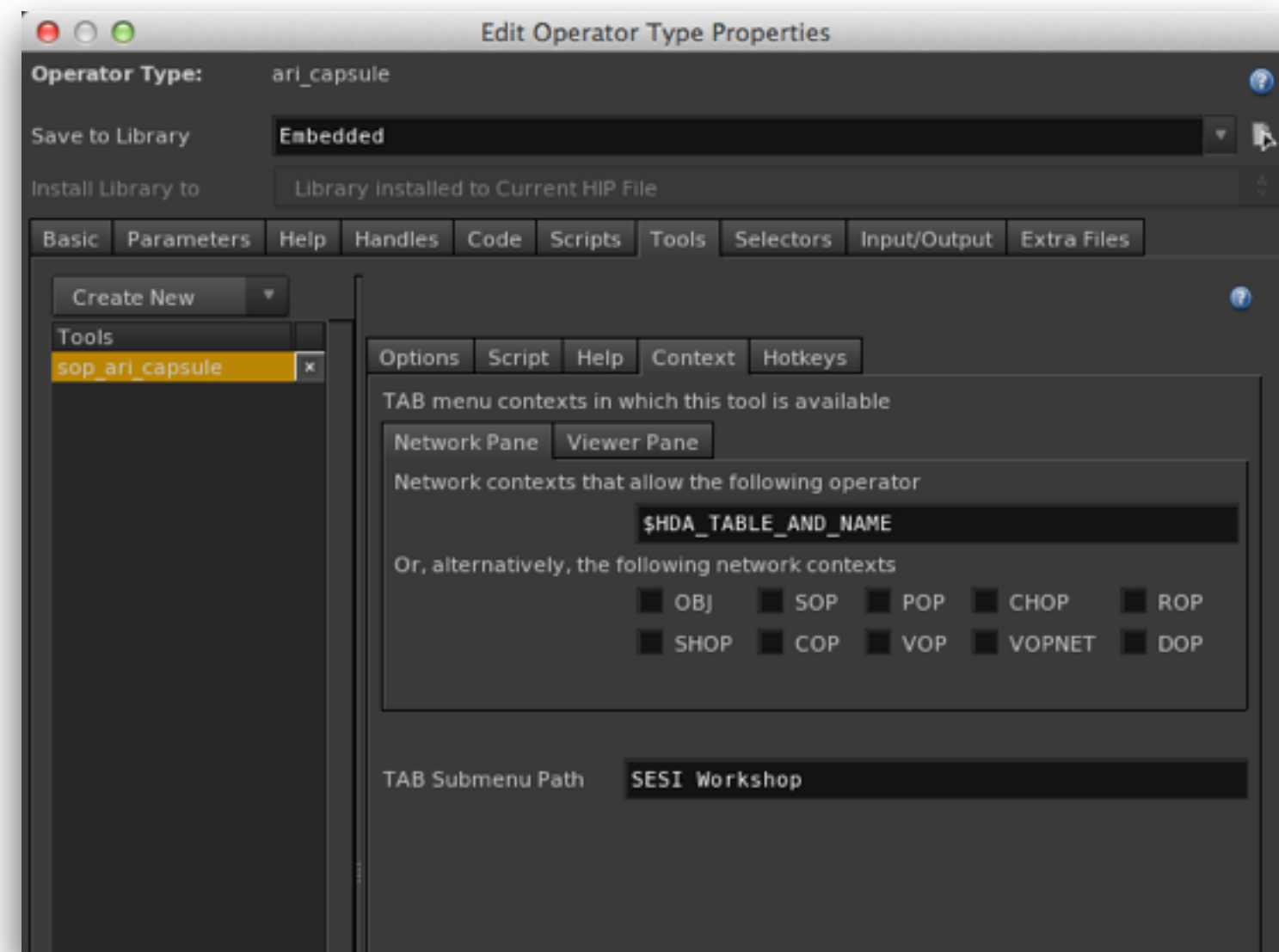
The `opdef` syntax always accesses the currently used definition for an operator.

You can also access an embedded file from another asset in the same library (.otl file). To do so use:

```
oplib:/Network_type/asset_name?Network_type2/asset_name2?section
```

The second operator type should exist in the same library that provides the active definition for the first operator type.

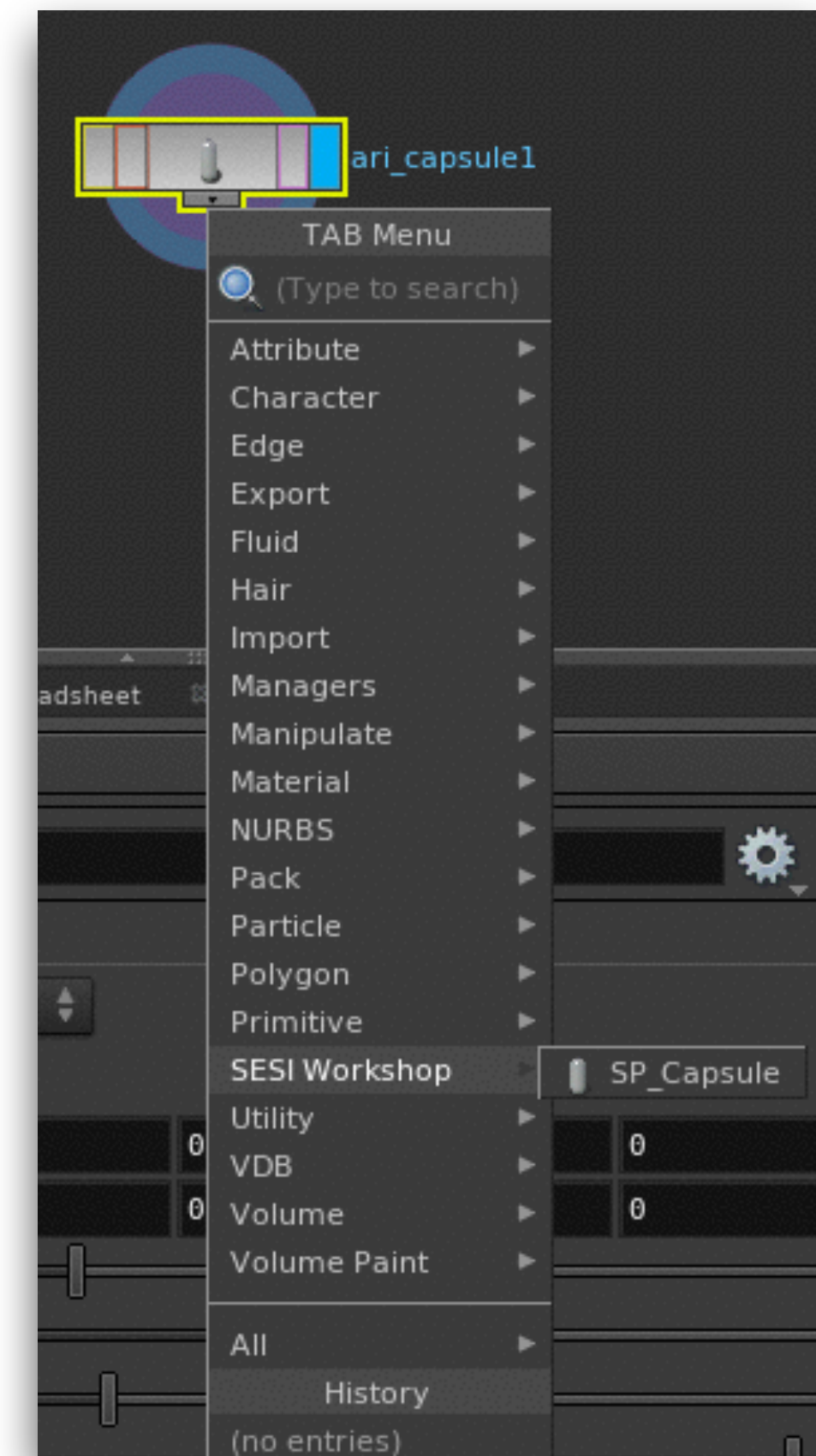
Creating a SubMenu for the Asset



Switch to the Tools Tab of the Operator Type Properties Window

Got to the Context Submenu

Tab Submenu Path - “Enter Your Name”



Basic Data Types

Color

File

File - Geometry

File - Image

Float

Integer

Folder

Operator List

Operator Path

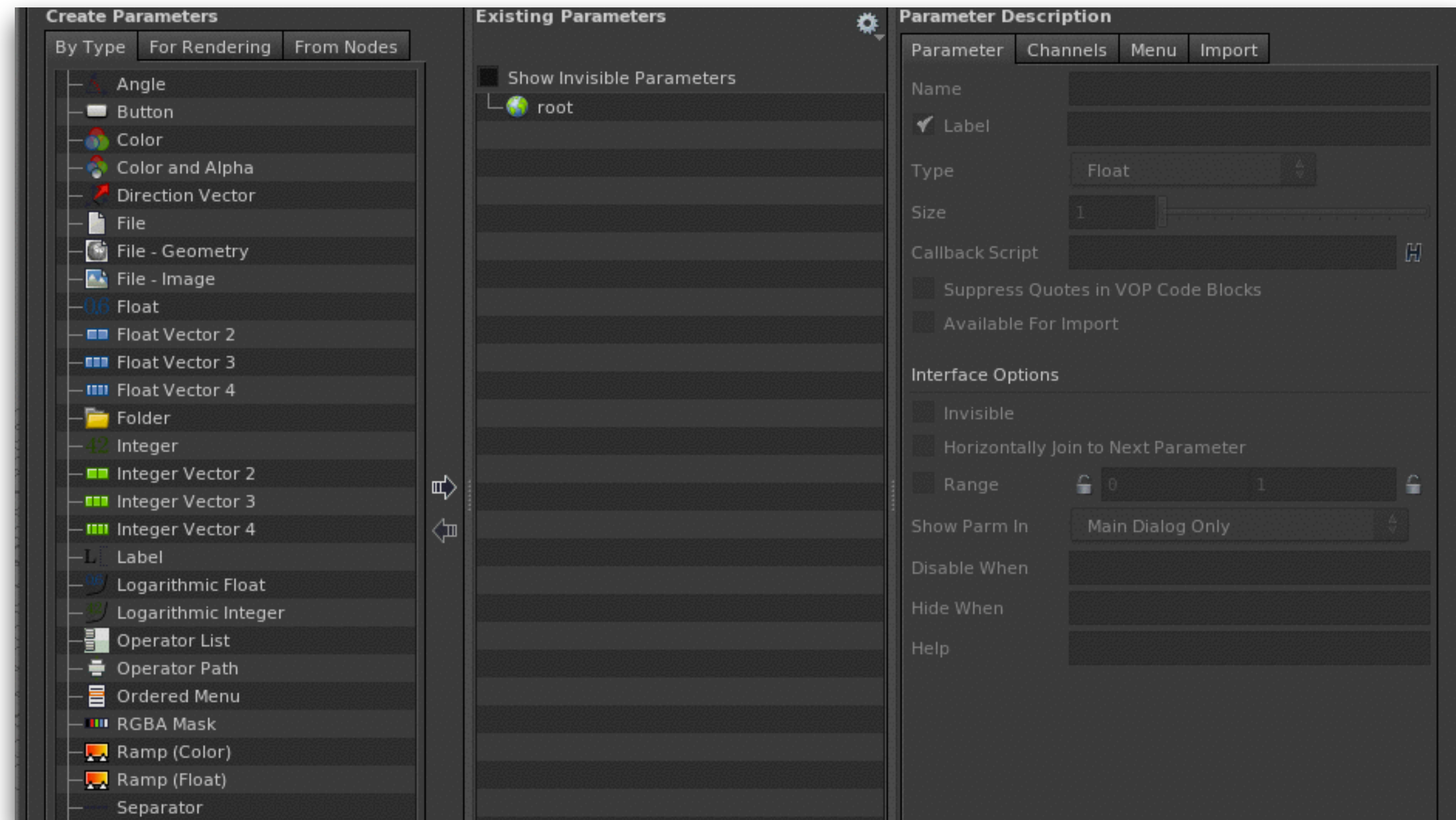
Ordered menu

Ramp Color

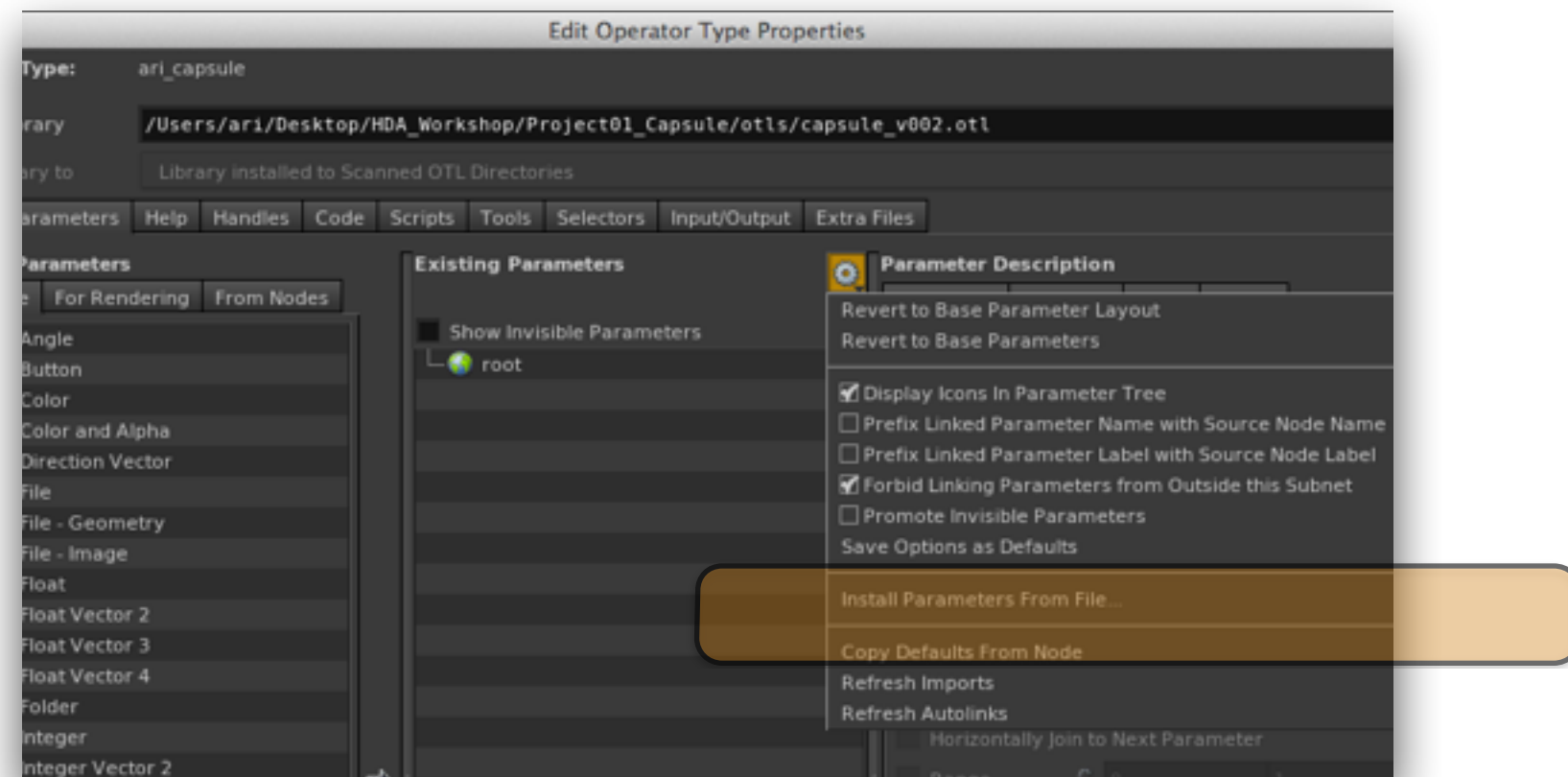
Ramp Float

Separator

Toggle



Promoting Parameters to the Digital Asset



Before we begin make sure :

Prefix Linked Parameter Label with Source Node Label - Deselected

Prefix Linked Parameter Name with Source Node Name - Deselected

Dive into the Network (Make sure it is editable - red label)

Let us start with the circle_cap SOP

Drag and Drop the rady parameter onto the root icon of the Edit Operator Type Properties Window

Change the Label to “Radius”

Select the Range Toggle and set the min range to 0.1.

Set Max range to 5

Lock the min range value

Click Apply

Test Radius

Notice the type was automatically set to float

Let us try another parameter

Drag and Drop the tz (center z) parameter onto the root icon of the Edit Operator Type Properties Window

Change the Label to “Height”

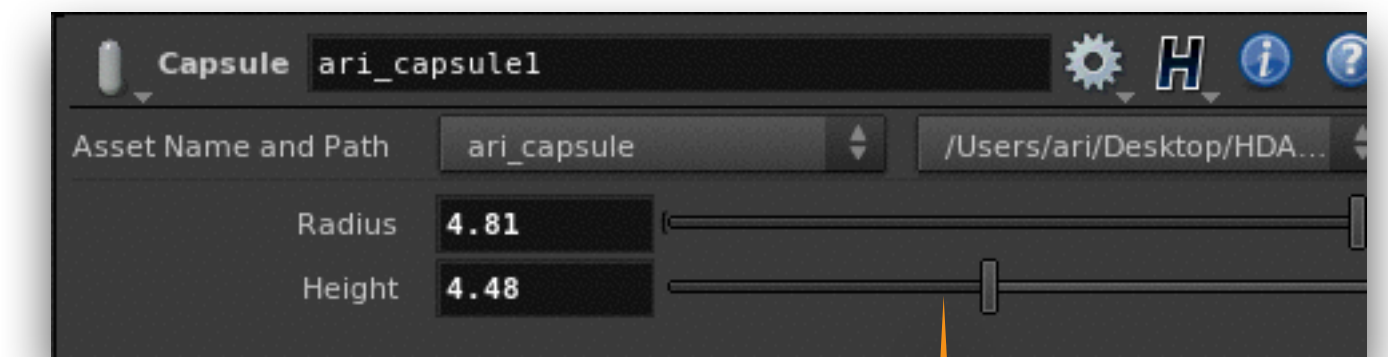
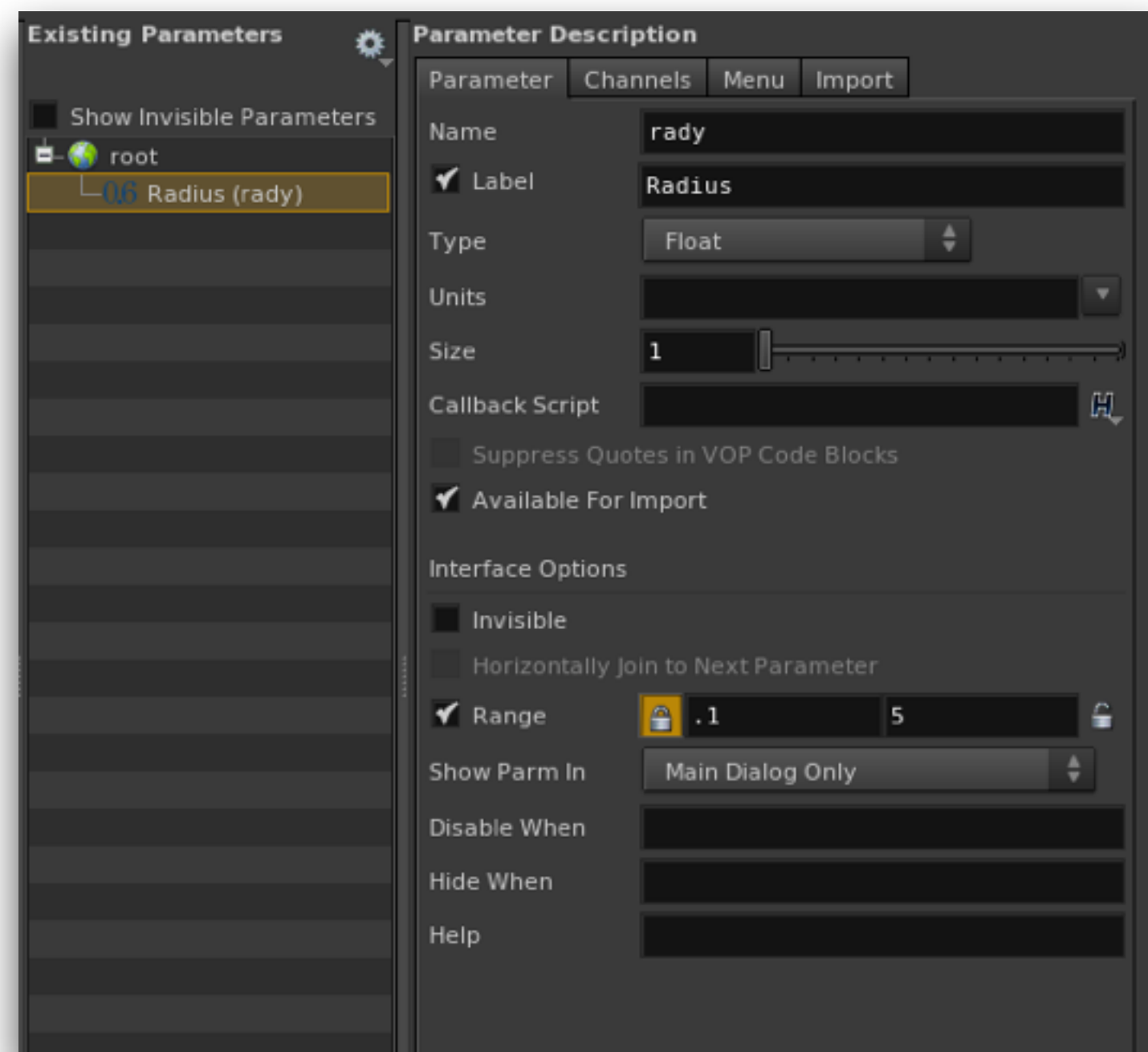
Select the Range Toggle and set the min range to 0.1.

Set Max range to 5

Lock the min range value

Click Apply

Test Height



Result So Far...

SIDE EFFECTS
SOFTWARE

Let us promote another type of value, an integer

Select the “Select Input” of the switch_hollow1 SOP

Drag and drop it on the obj icon

Change the name to hollow

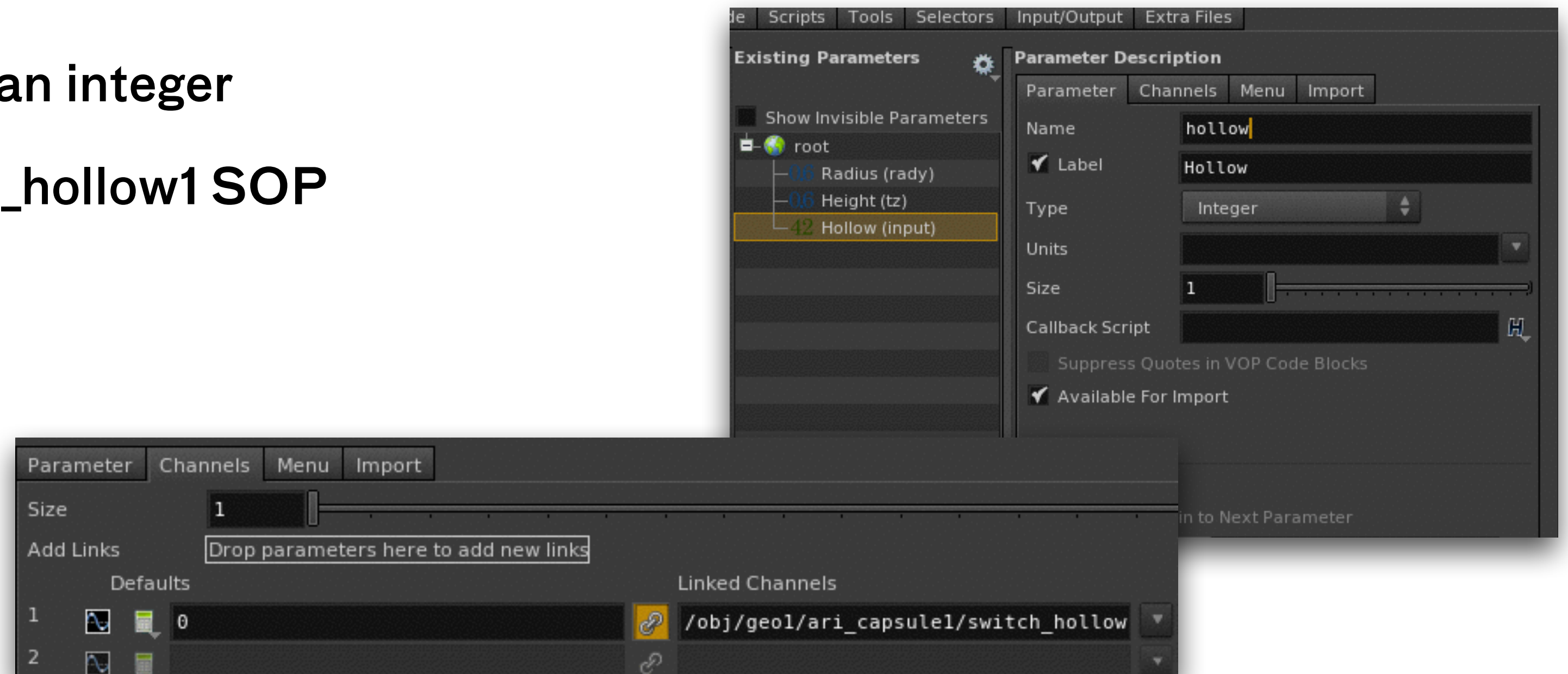
Change the Label to Hollow

Notice the Type is set to Integer

Switch to the Channels Tab

You can see the integer value defaults to 0 - not hollow

And the UI is linked to the switch node



Toggles (cont.)

Right now the Type is set to Integer

Therefore you can set a range (min/max)

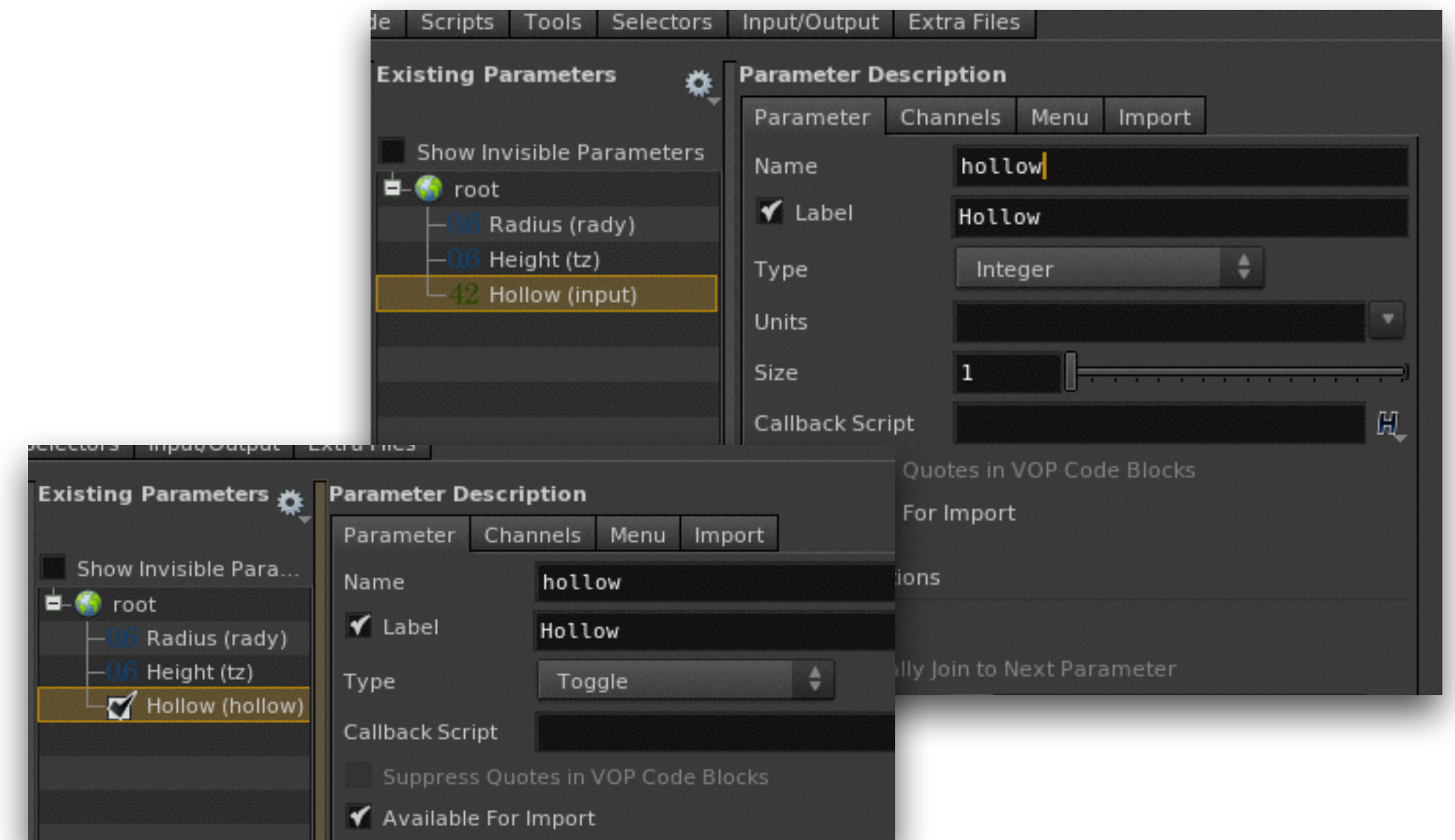
It would be better to be able to set this to on/off

On - it is hollow, Off - it is solid

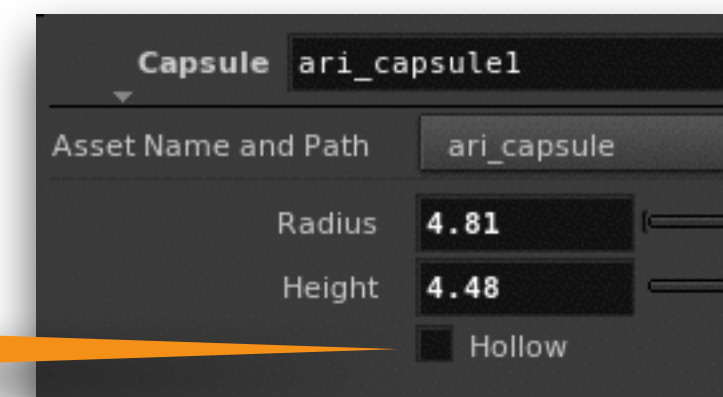
That is where Toggles come in

Change Type to Toggle

Select Apply



Toggle

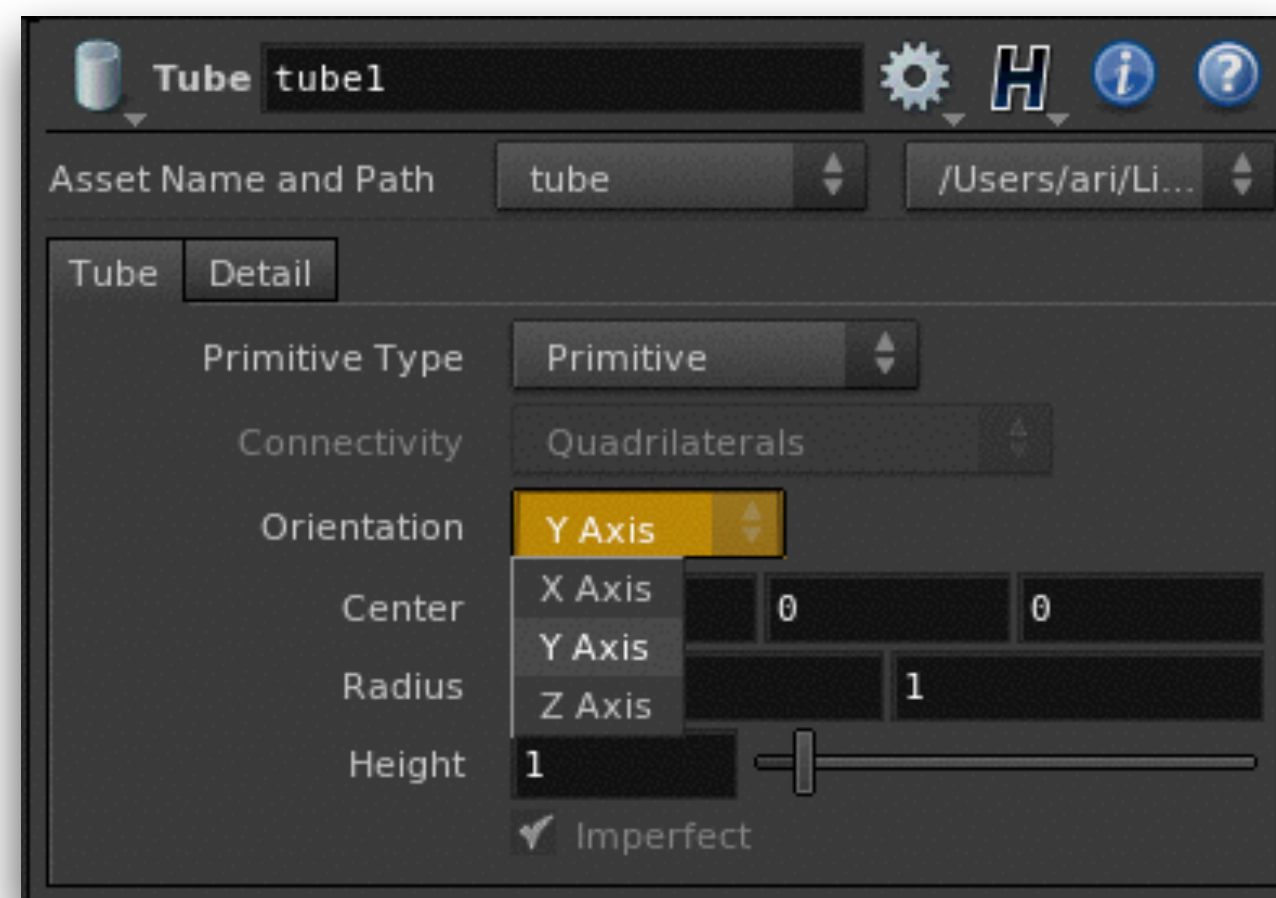




Adding Orientation

Creating a Simple Menu

Mimicking the Tube SOP's Orientation



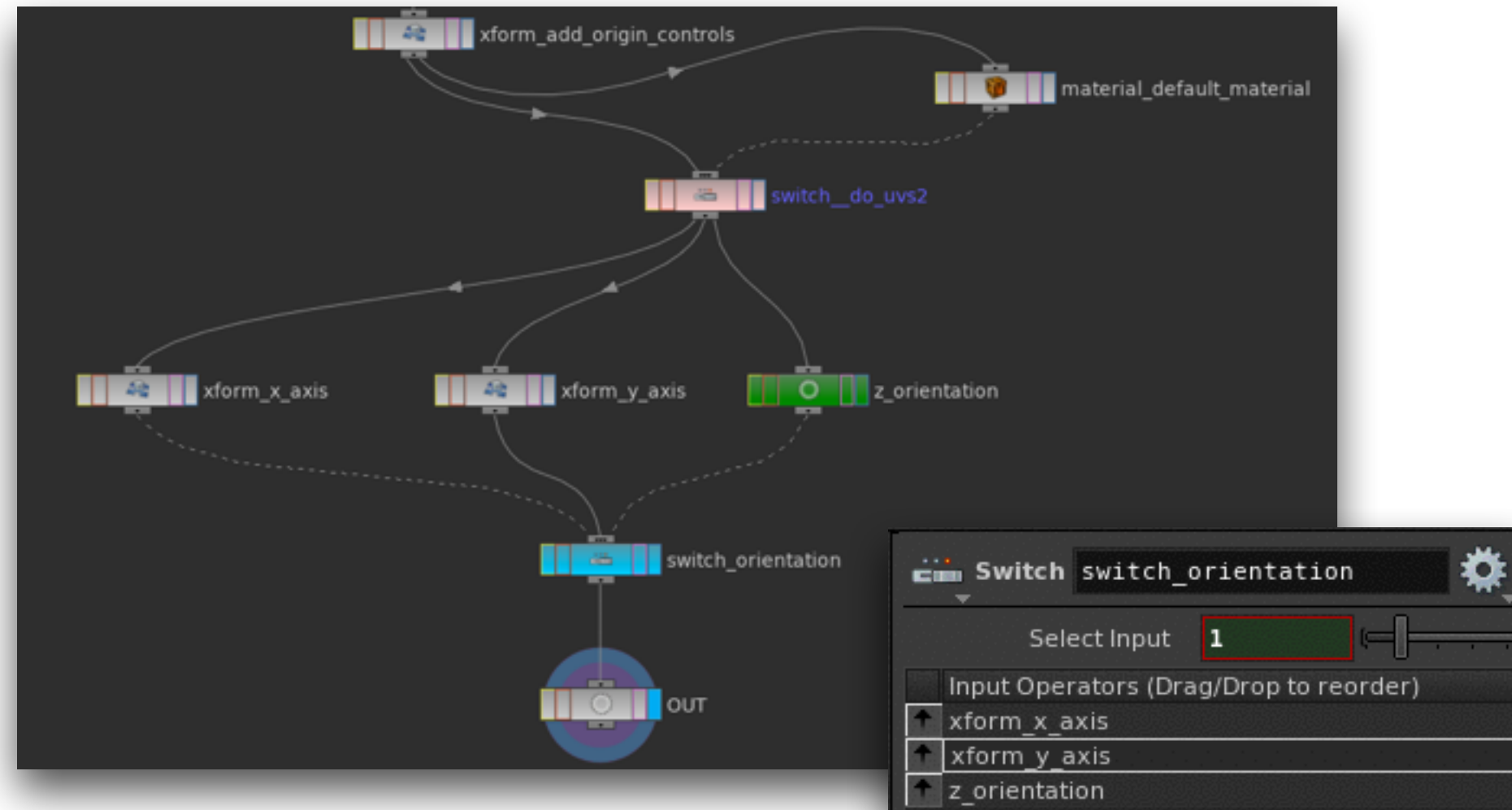
We want to create some logic that mimics the Tube SOP's Orientation Parameter

Label - Orientation

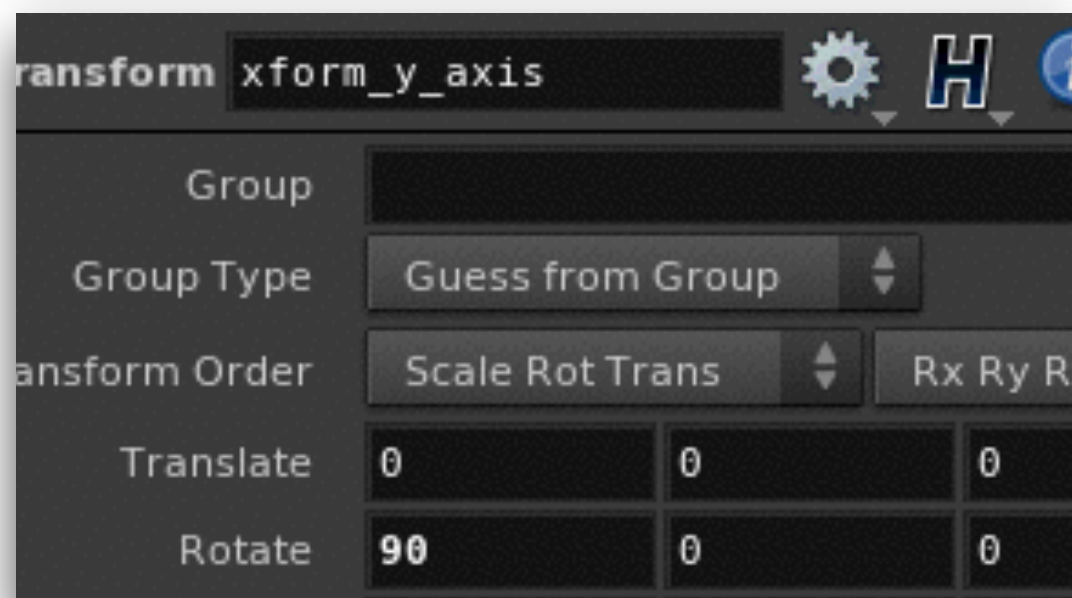
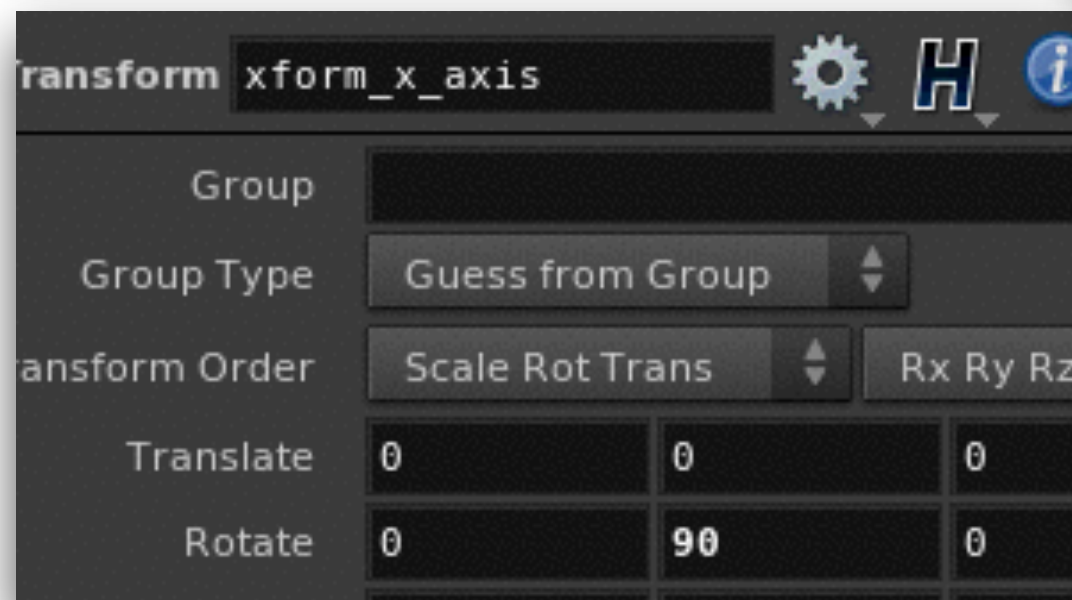
Name - orientation

Parameter Values - X Axis, Y Axis, Z Axis

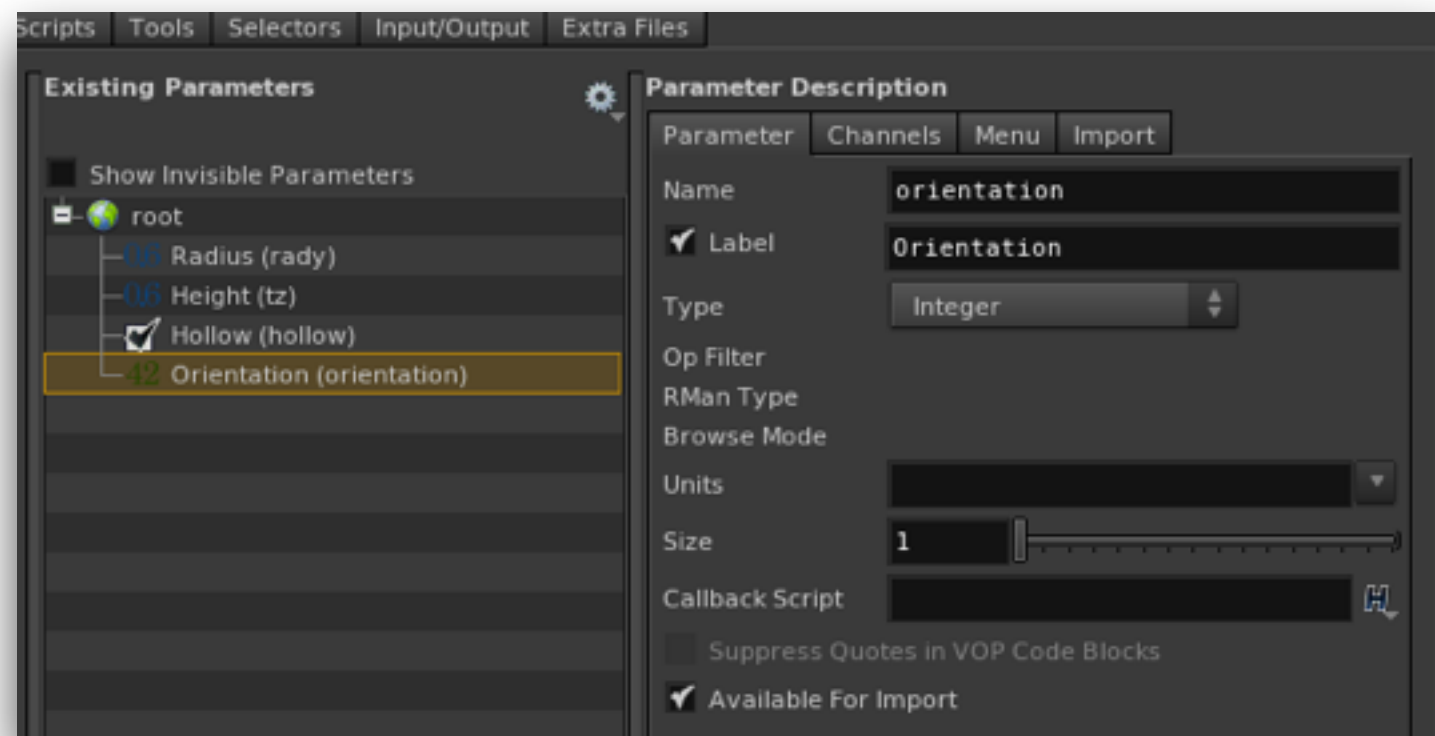
Adding to the Network



Note - I like to add a Null for z_orientation so it is easier to read the logic. Completely optional



Making a Simple Drop Down Menu



Drag the Select Input parameter of the Switch SOP into the Type Properties Window

Notice the type is an integer. We will keep it as an integer since this time we are not creating a “Toggle”

Switch to the Menu Tab

Select “Use Menu”

Right under Menu Items there are two blank fields. Enter:

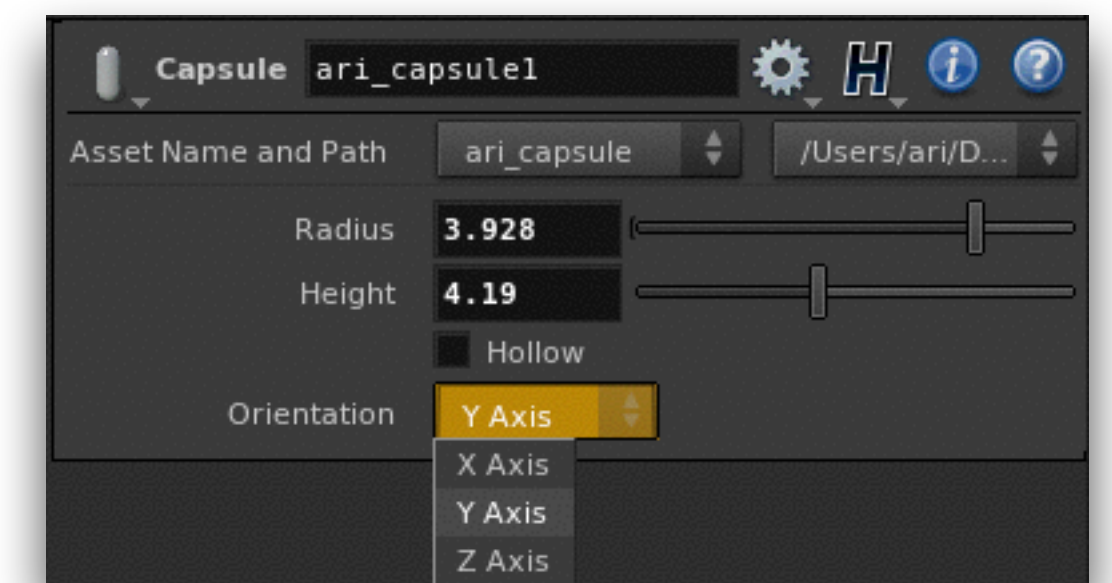
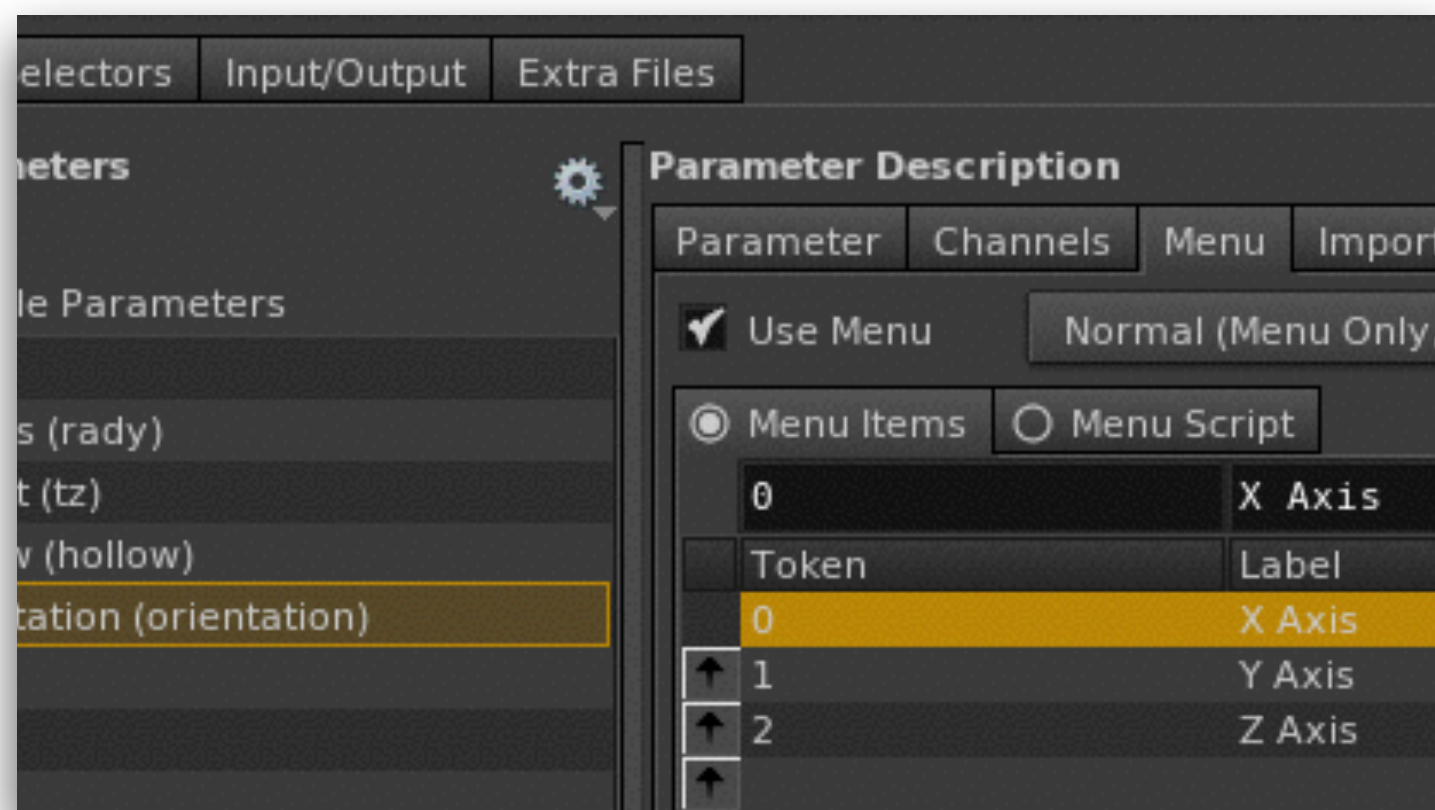
Token - 0, Label X-Axis. Hit the Enter Key

Repeat:

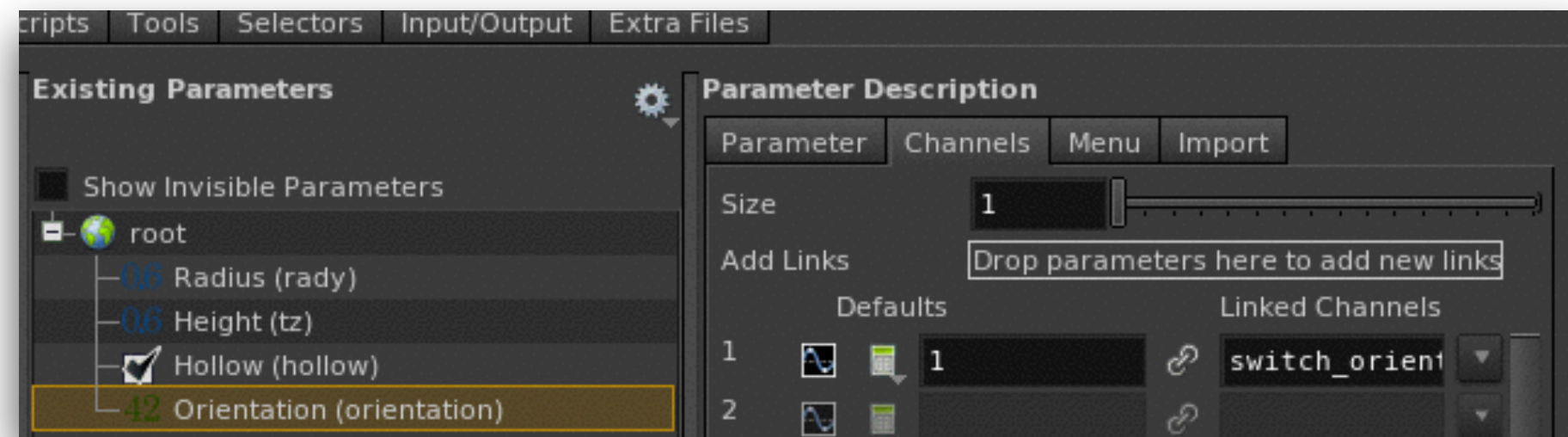
Token - 1, Label Y-Axis

Token - 2, Label Z-Axis

Hit Apply and test The Drop Down Menu



Setting a Default Value



If we look at the Tube Asset we will see the default orientation of the Tube is the Y-Axis. Let us do the same.

Switch to the Channels Tab

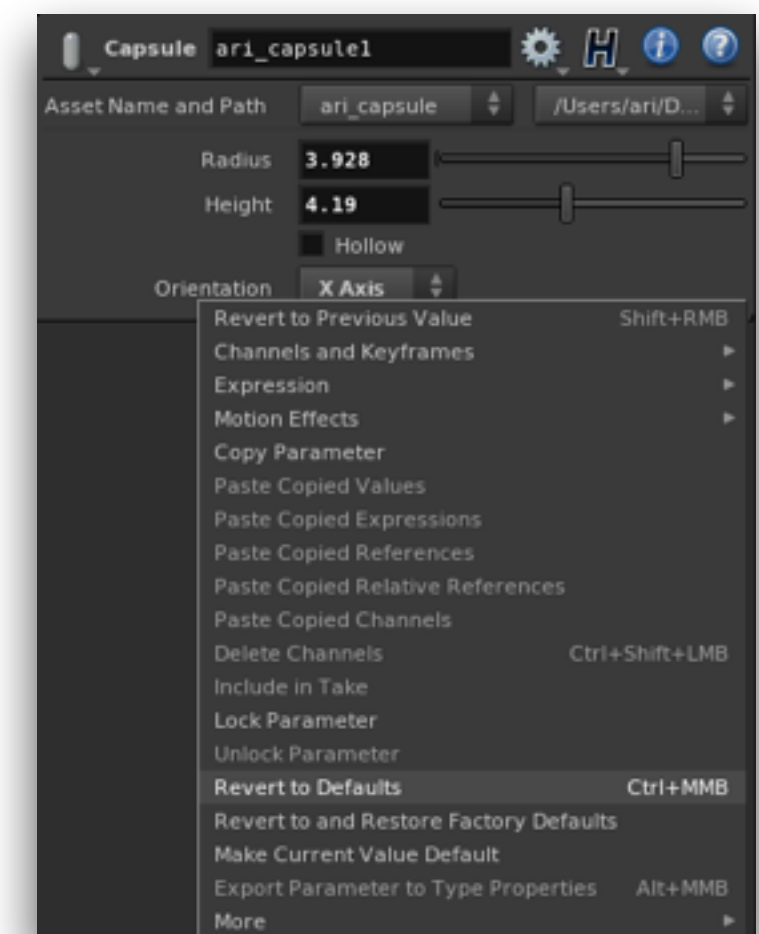
Size is 1 - This means that the parameter has only one value like integer or float, as opposed to color which would have 4

Defaults - Since X-Axis is 0, Y-Axis is 1, Z-Axis is 2

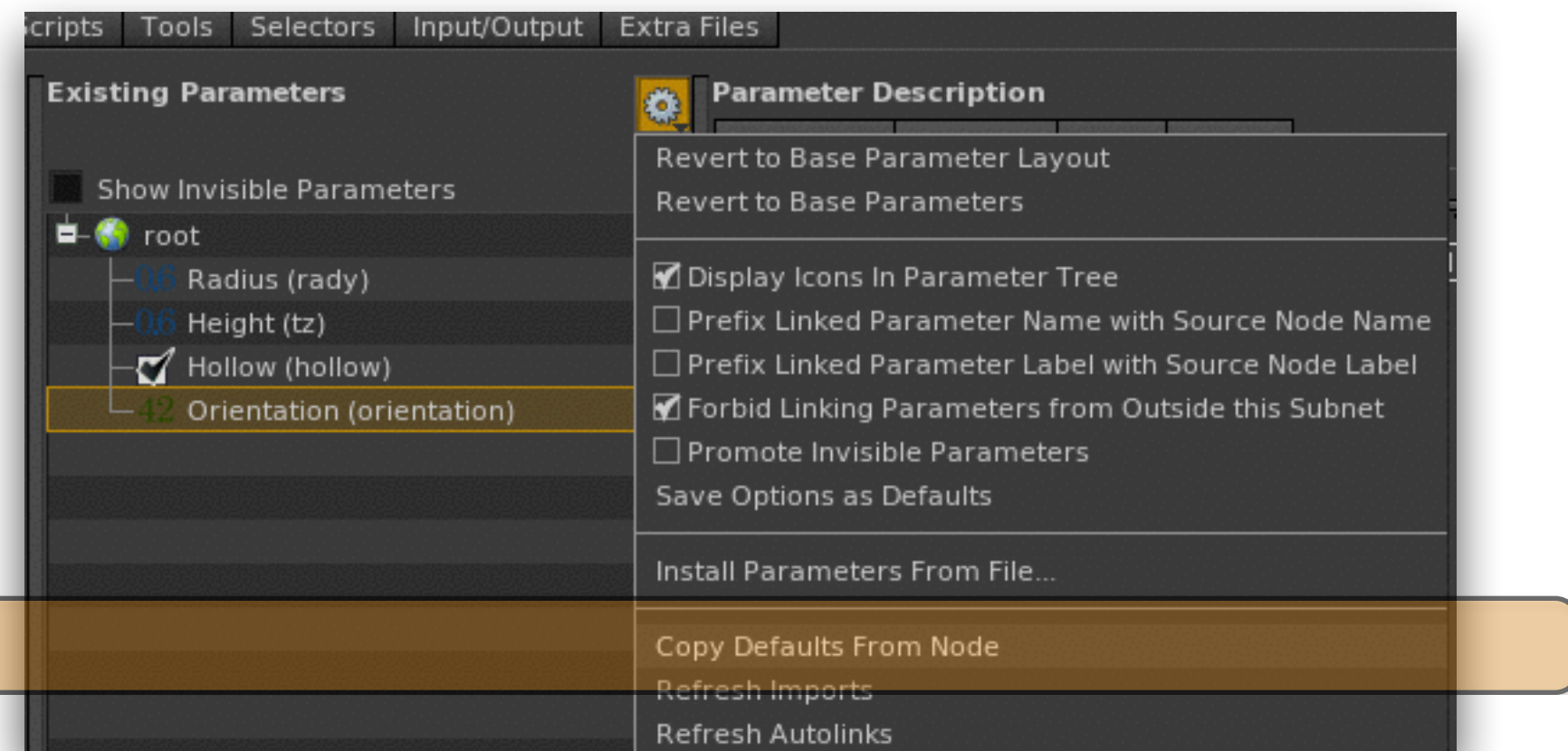
Set Defaults to 1

Click Apply.

In the parameter you might have to right click and select “revert to defaults”



Another Way to Set Defaults



Click on the gear icon in the parameters tab and select:

“Copy Defaults from Node”

Be careful! This will pick up all the values in your network and make them defaults



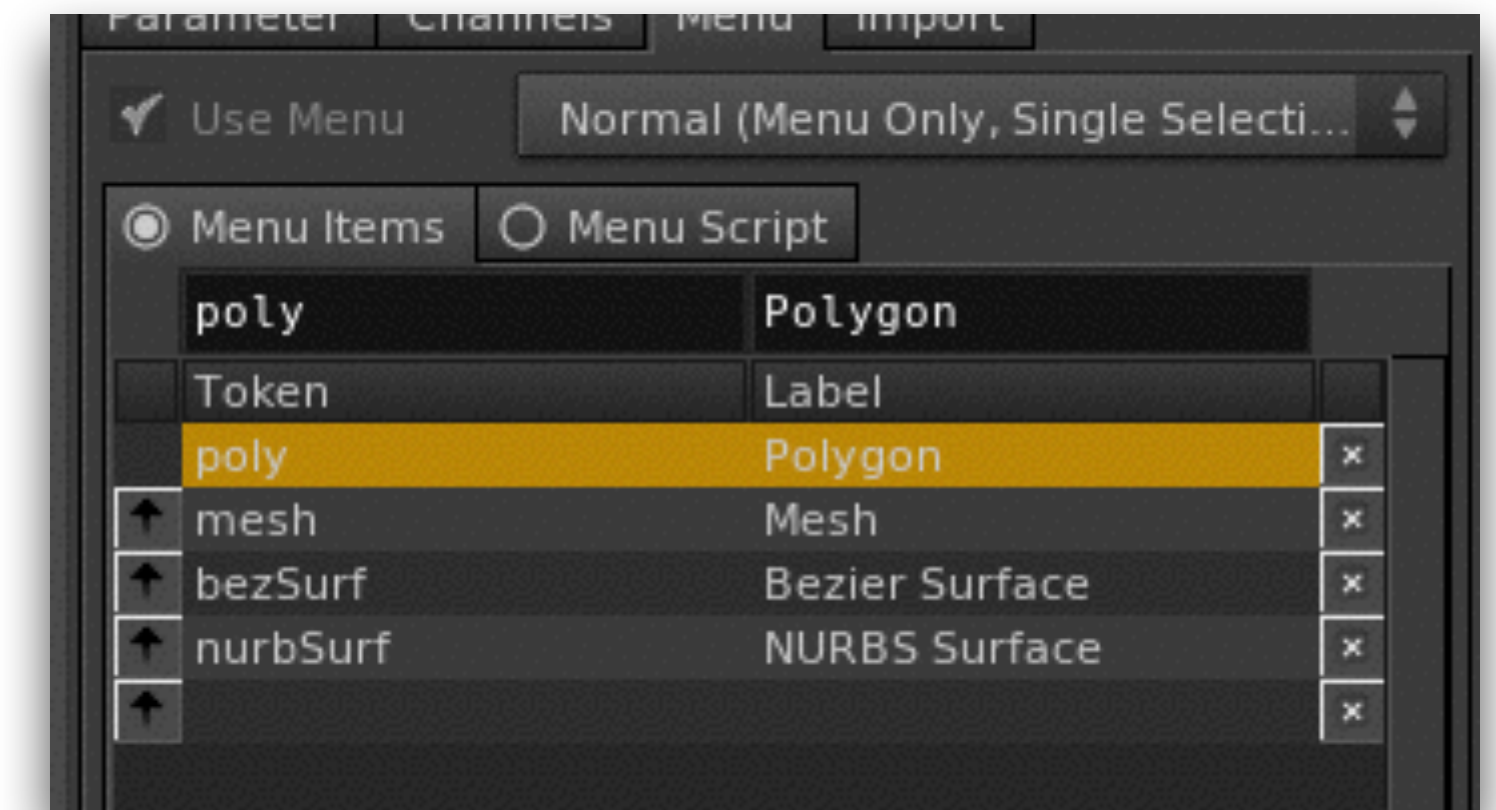
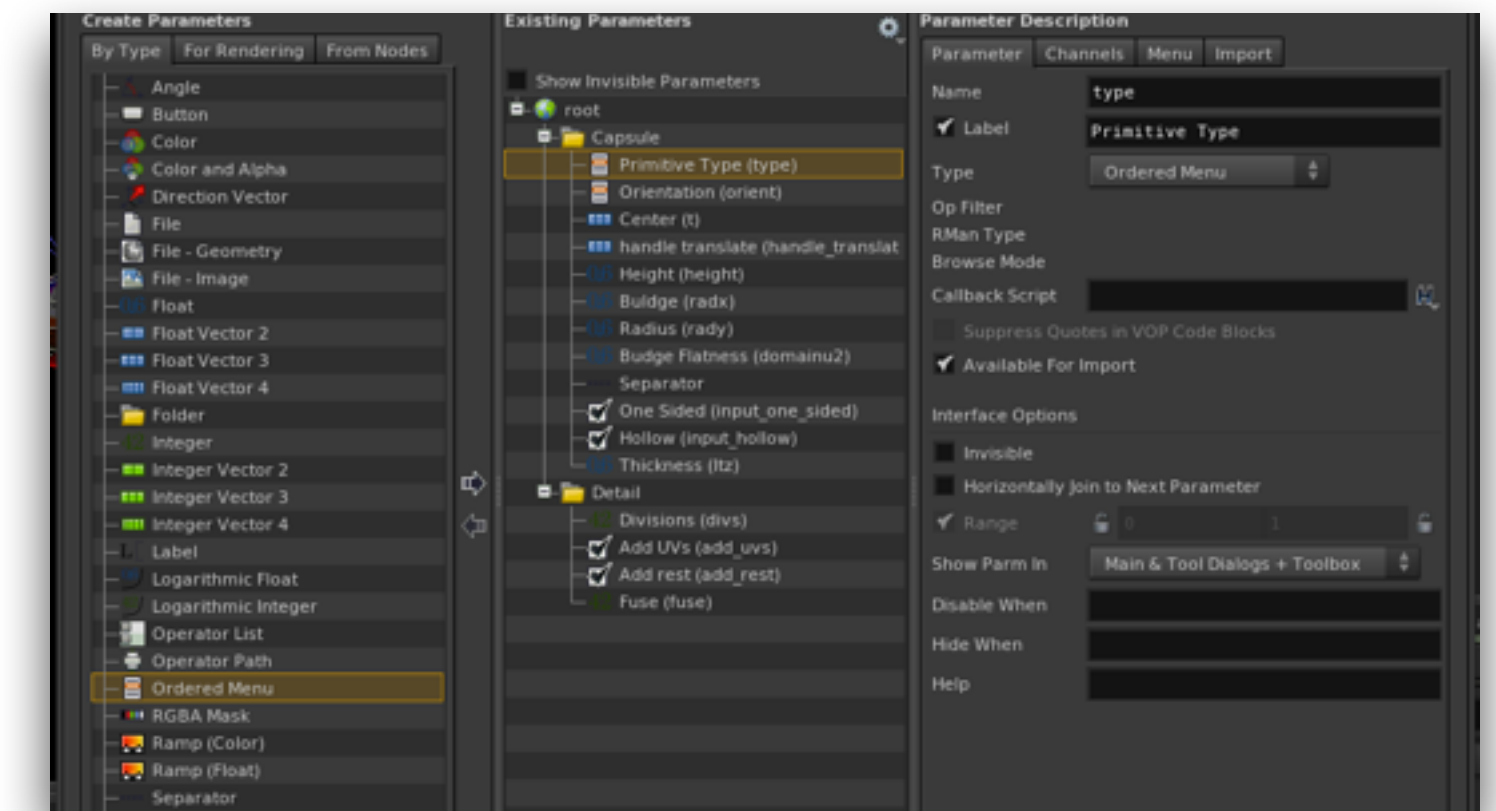
Adding Primitive Type

Creating an Ordered Menu

What is an Ordered Menu?

A String Based Menu. Meaning that the index into the list is not important. Only the Key-Value is interpreted.

This is different then the simple menu we created for orientation. In the simple menu the tokens where just a numerical value.



Creating an Ordered Menu

Let us make an ordered menu of Data Types for the capsule.

Select the “convert_primitive_type” Sop

Take a look at the “Convert To” drop down menu

There are many choices to choose from

Only a few make sense

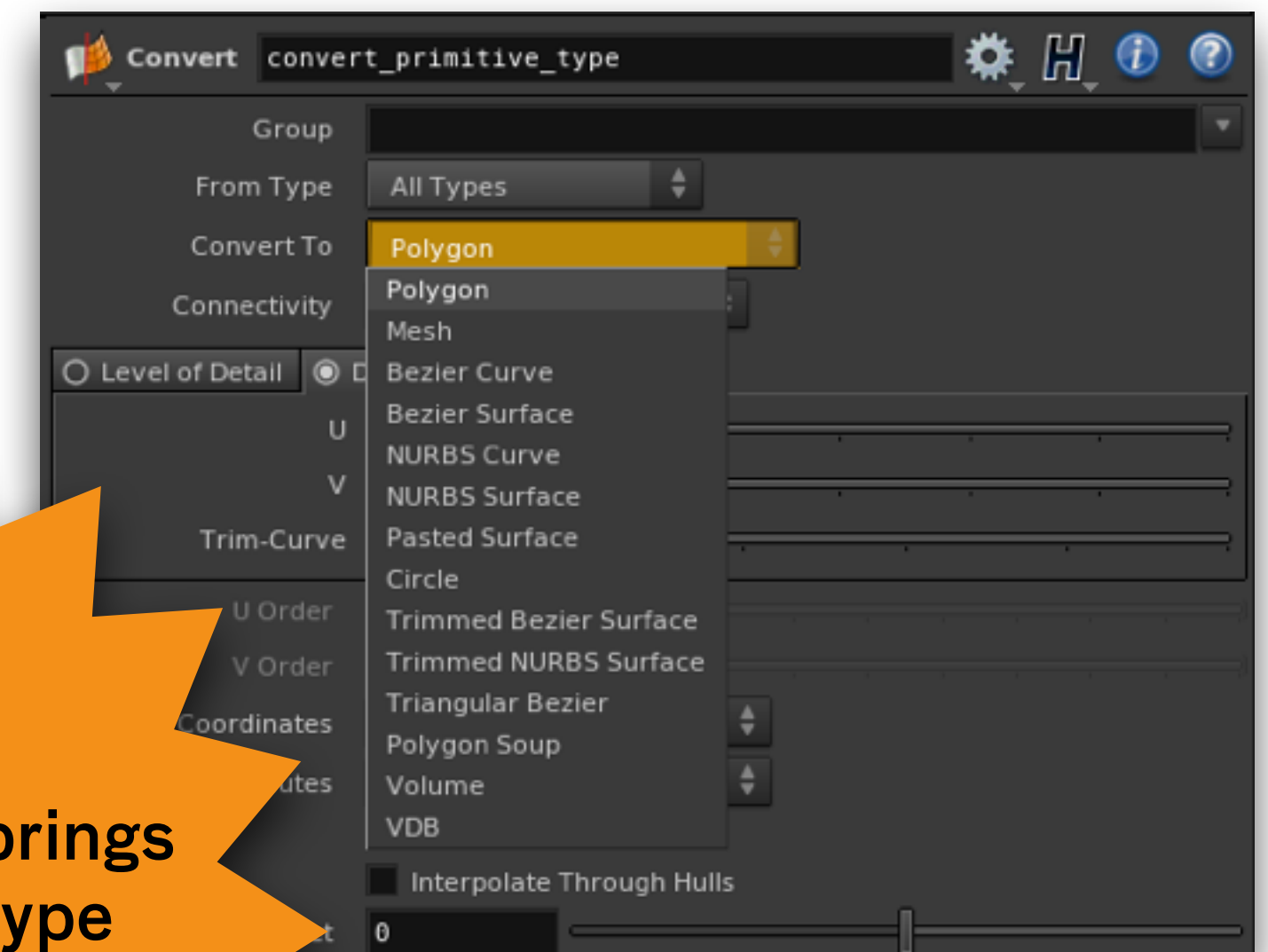
Polygon

Mesh

Bezier Surface

NURBS Surface

We will want to delete the other options



Tip

Hitting the “/” key brings up a find panel. Type “convert” and the enter and the convert node will be selected

Creating an Ordered Menu (cont.)

Drag the “Convert To” parameter into the Type Libraries

Notice the Type generated is: Ordered Menu

Switch to the Menu Tab

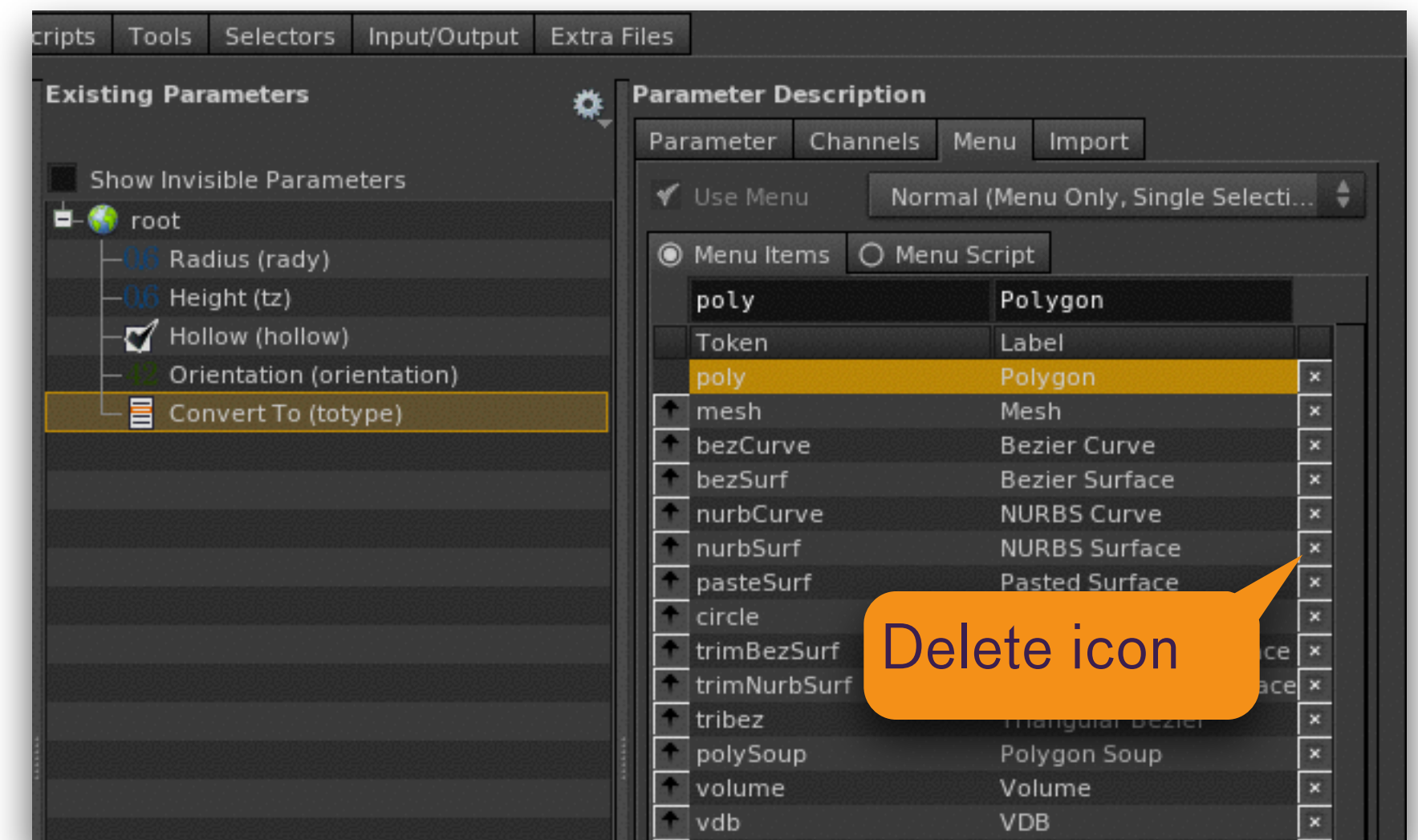
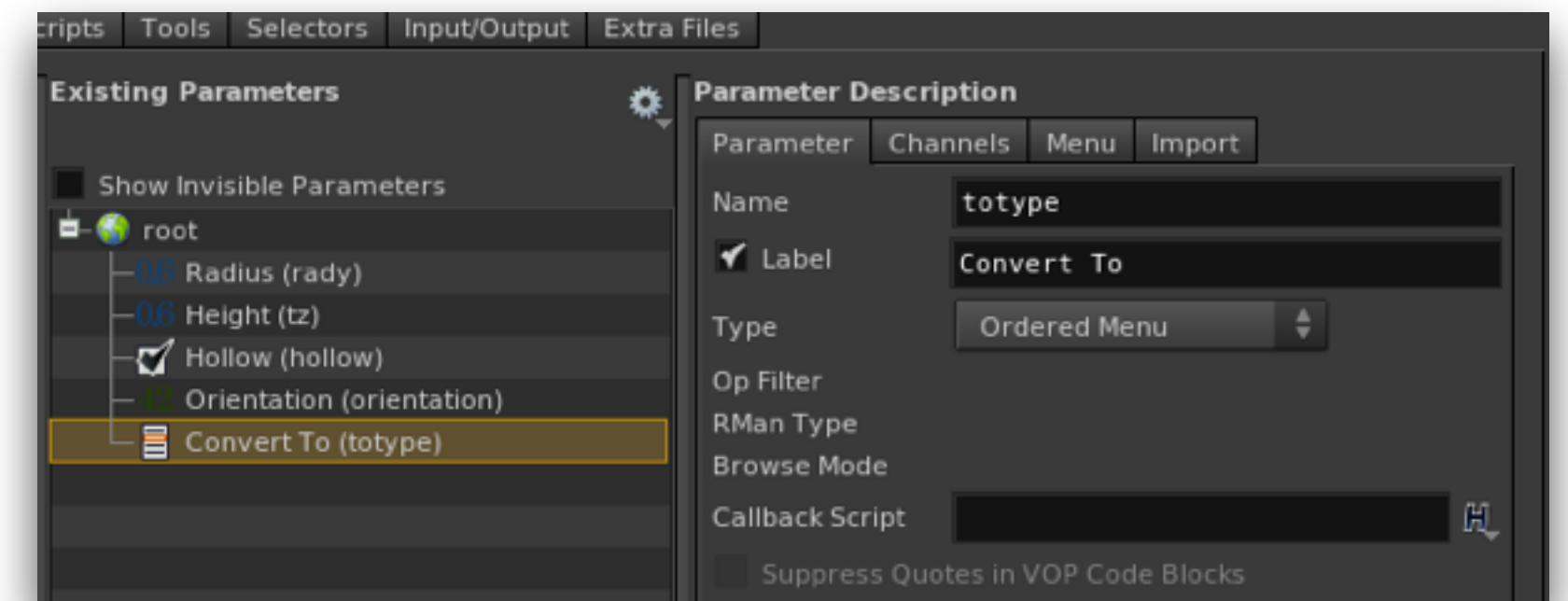
Notice all the data types were imported

Notice the tokens are strings (e.g., poly”)

We only want a few data types

Delete everything except: poly, mesh, bezSurf, nurbSurf

To delete click the “x” icon on the very right of the token/label pair



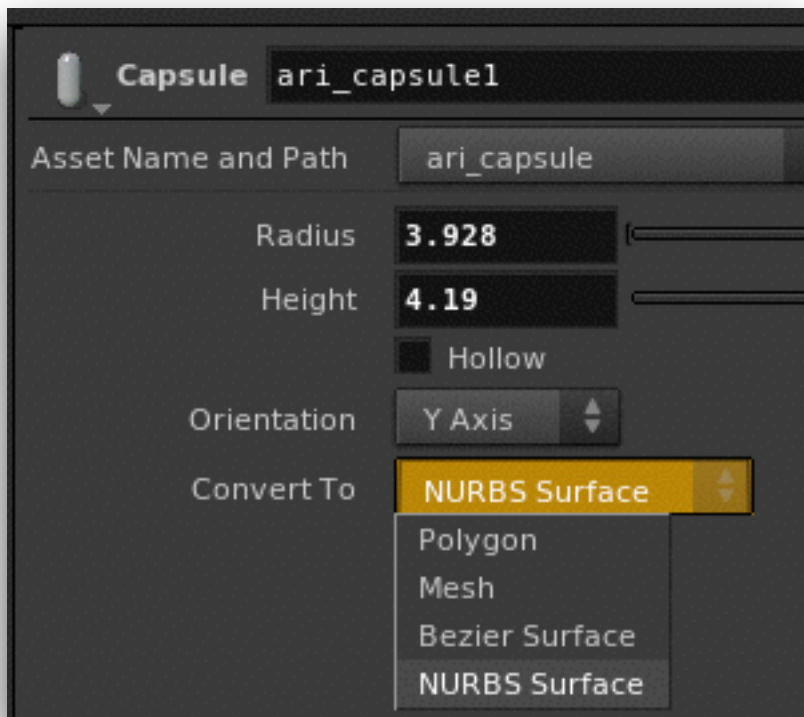
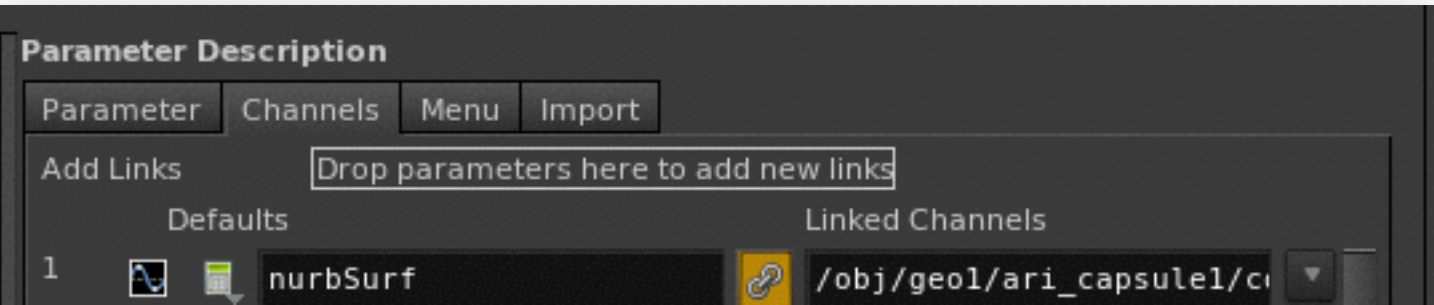
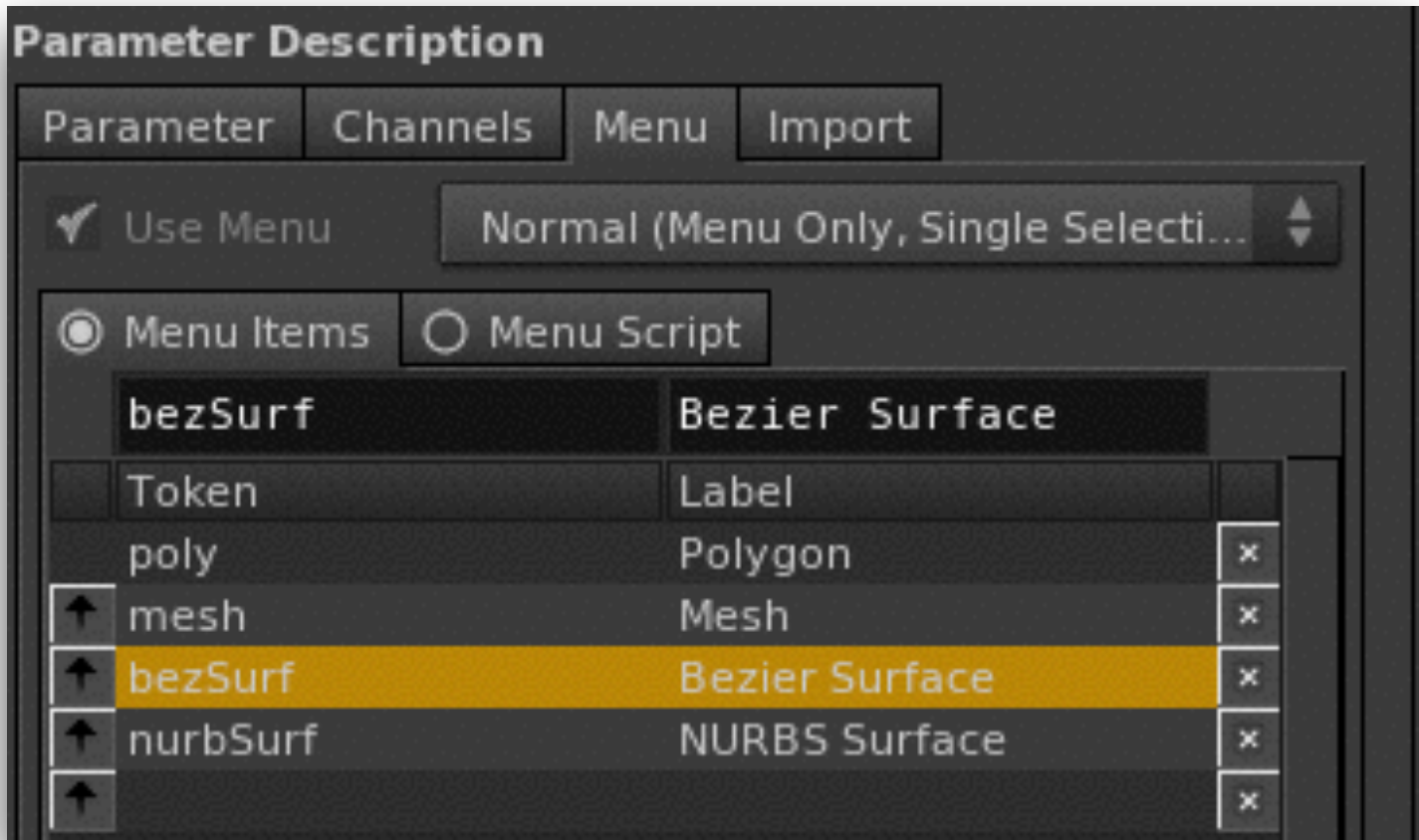
Creating an Ordered Menu (cont.)

End result should look like the image on the right

To set a default got to the Channels tab and enter a token

I entered “nubsSurf” for NURBS Surface

Hit Apply and test results





Disabling Parameters

Disabling Parameters

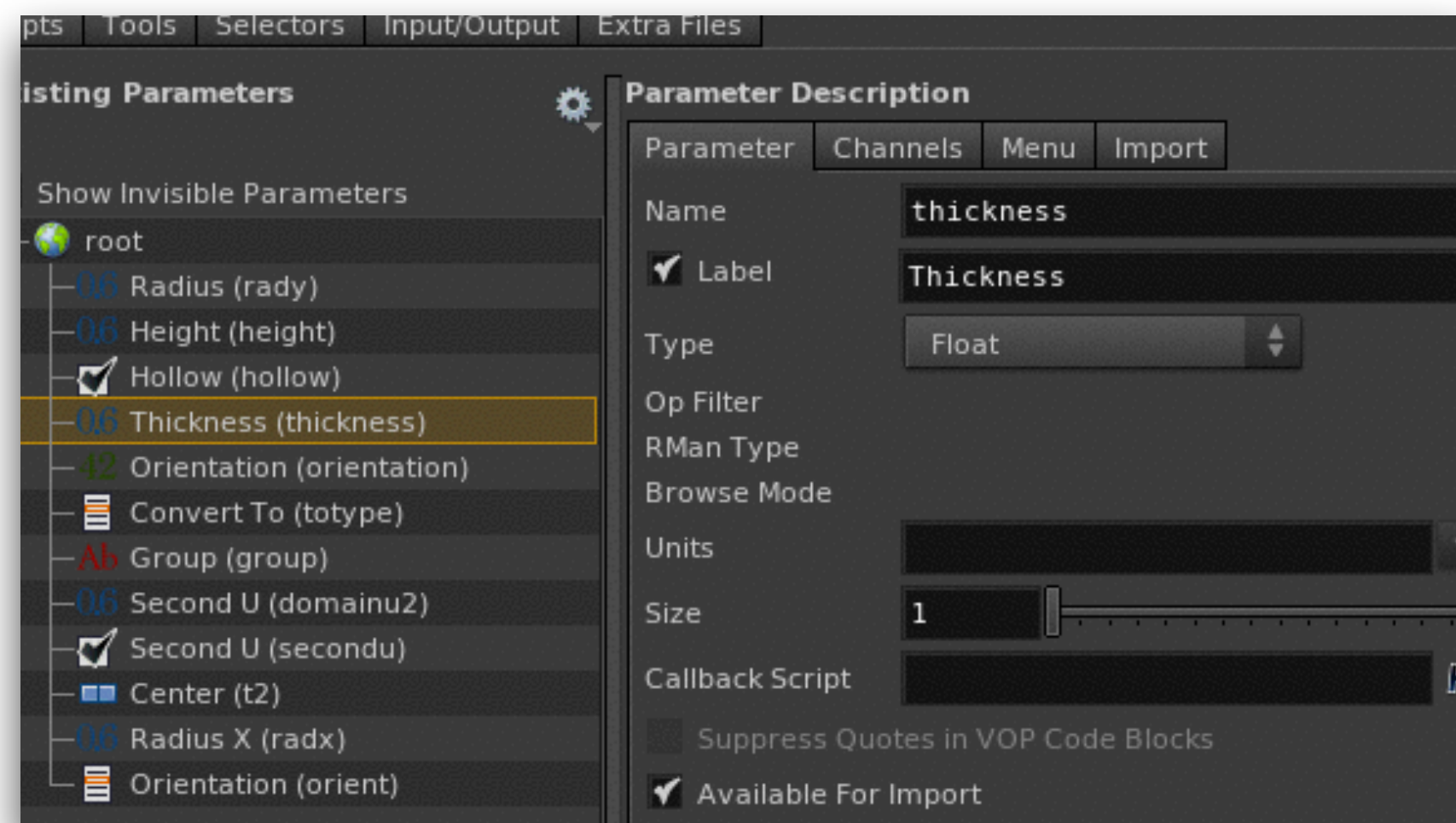
You know if you do not want a hollow capsule there is know reason to give the user control over the thickness of the capsule

Open up the Type Properties Window

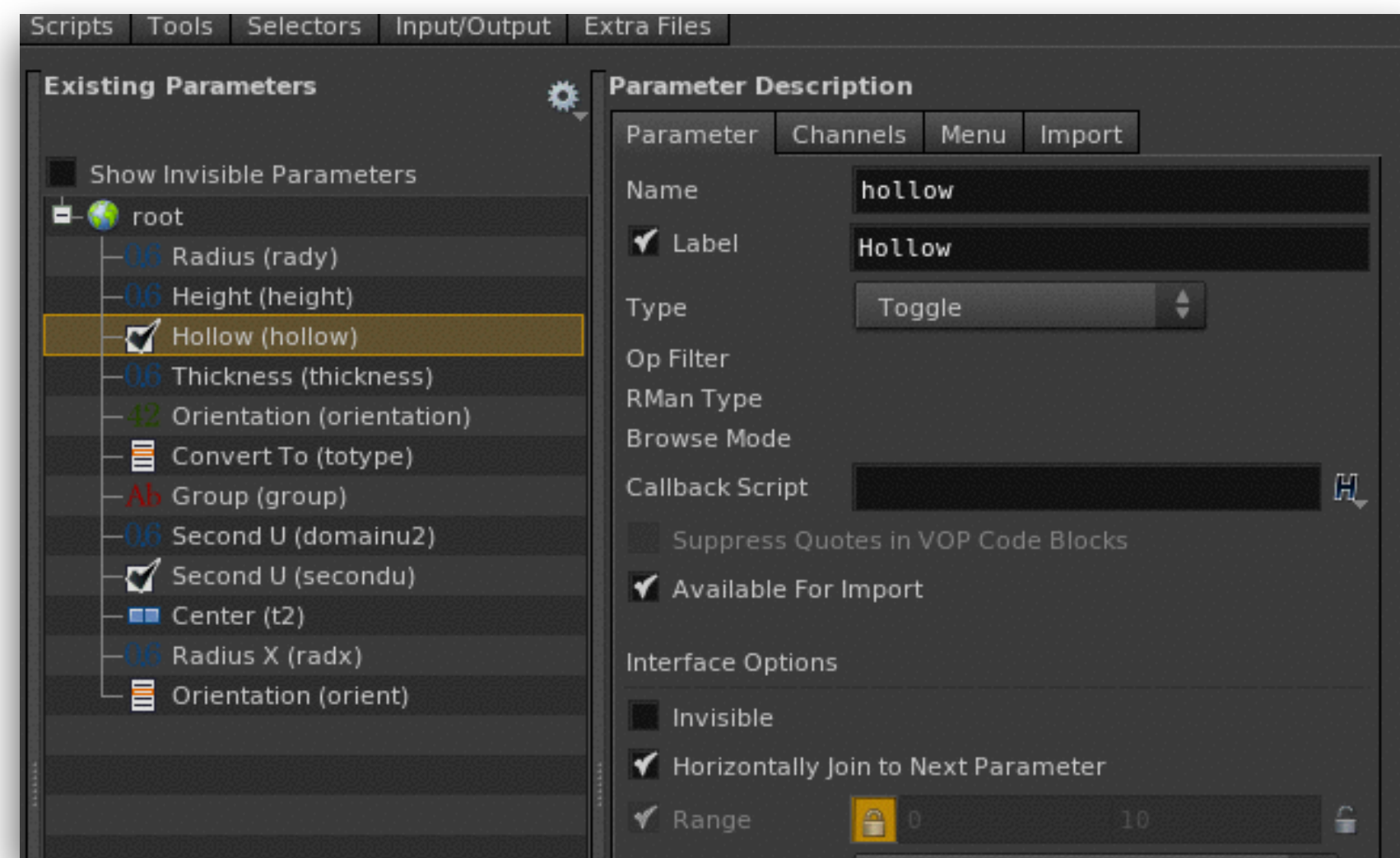
Dive into the Network

Select the Peak SOP

Drag the “Distance” Parameter into the Parameters tab of the Type Properties window right below the “Hollow” parameter



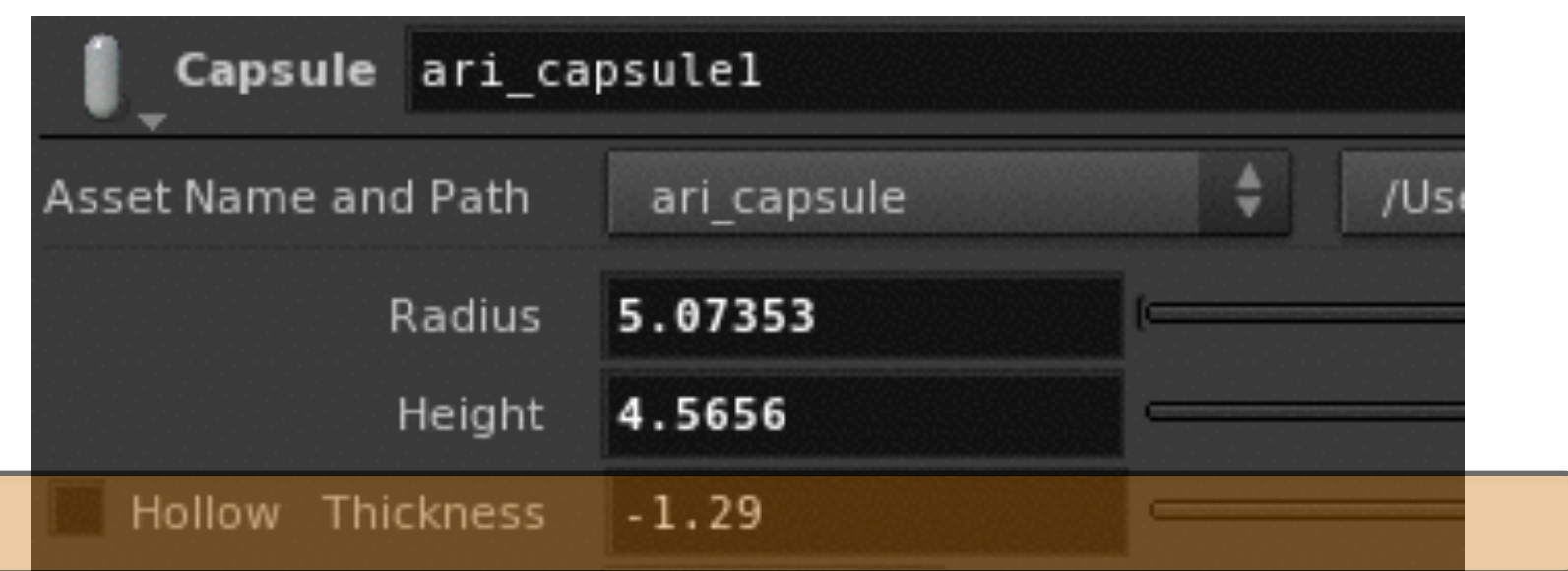
Disabling Parameters (cont.)



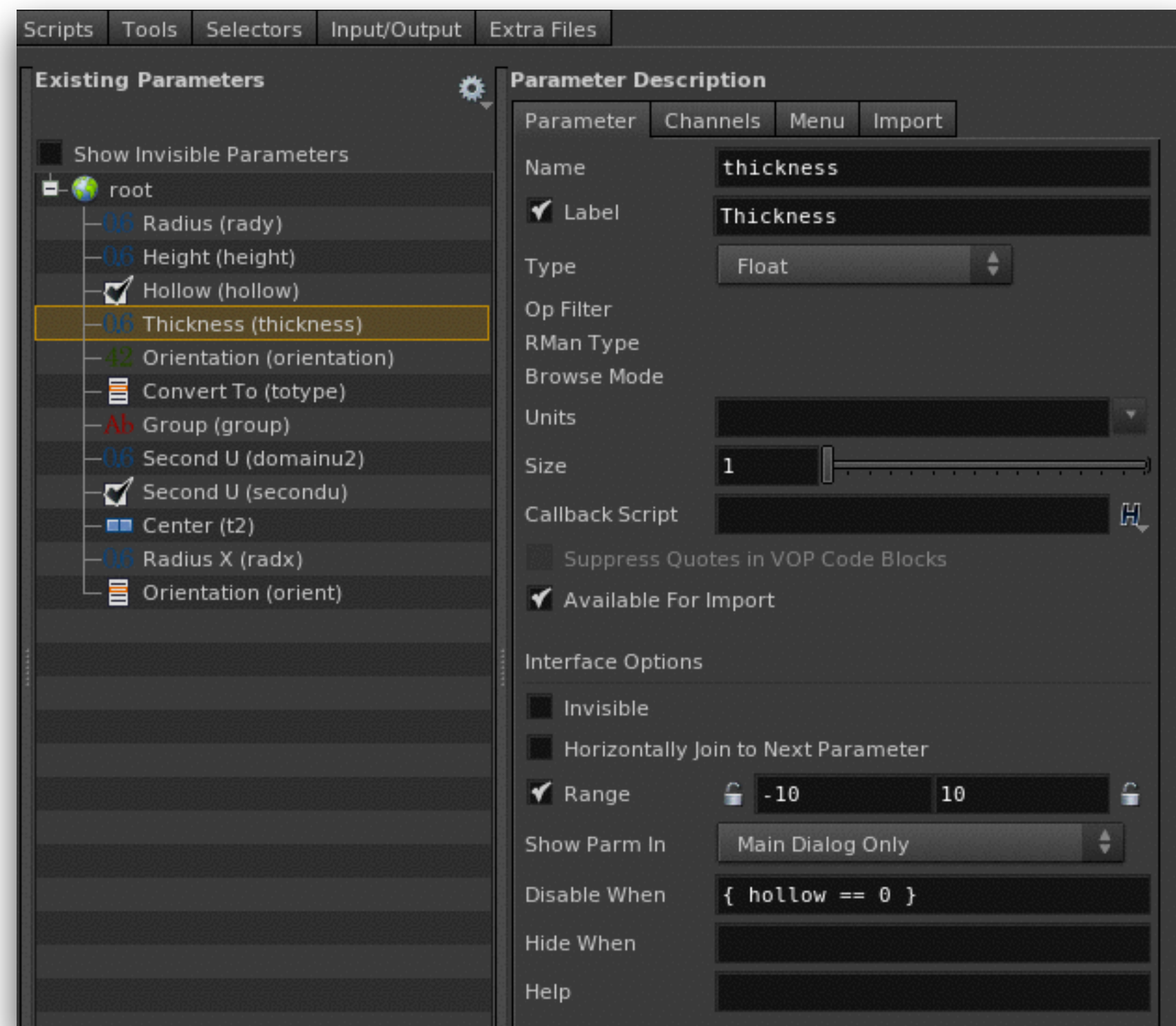
In the “Hollow” parameter select “Horizontally Join to Next Parameter”

Click “Apply”

Notice the toggle and thickness are now on the same line



Disabling Parameters (cont.)



We only want the artist to be able to Change Thickness if Hollow is Selected

Otherwise Thickness should be grayed out

Select the Thickness parameter in the Type Properties

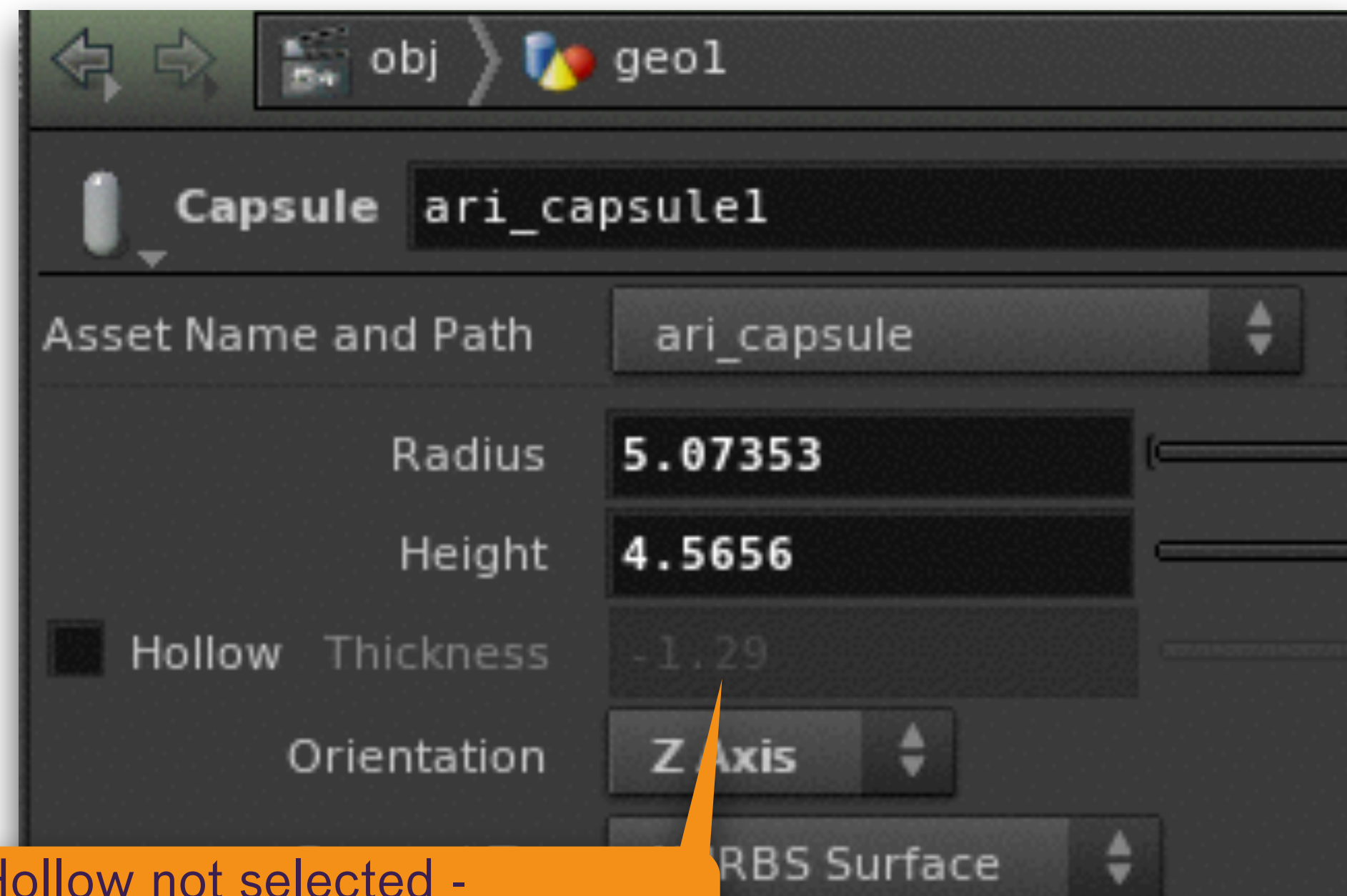
In the “Disable When” field type:

`{hollow == 0 }`

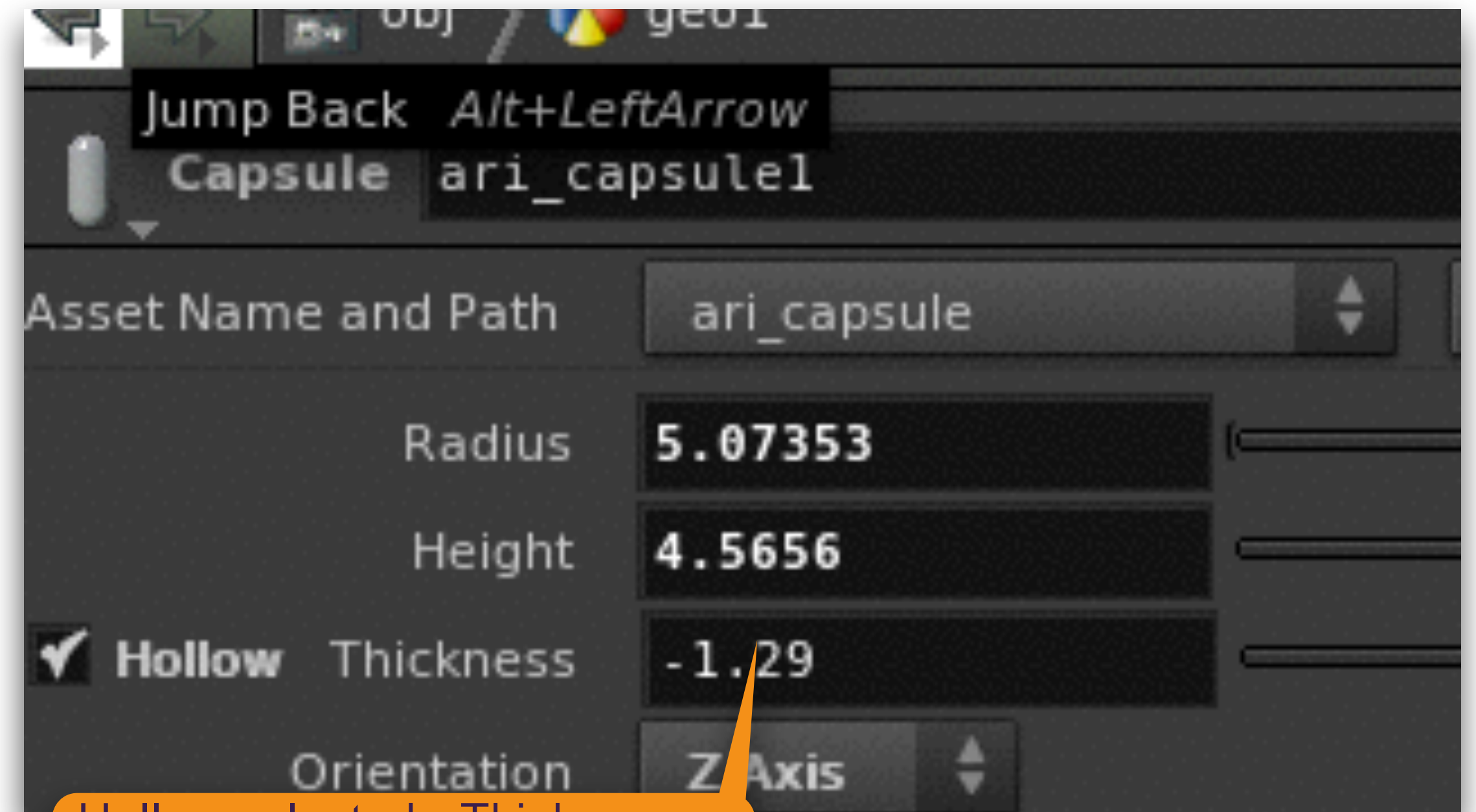
Click Apply

Notice if Hollow is not selected, Thickness is grayed out

Disabling Parameters (cont.)



Hollow not selected -
Thickness Grayed Out



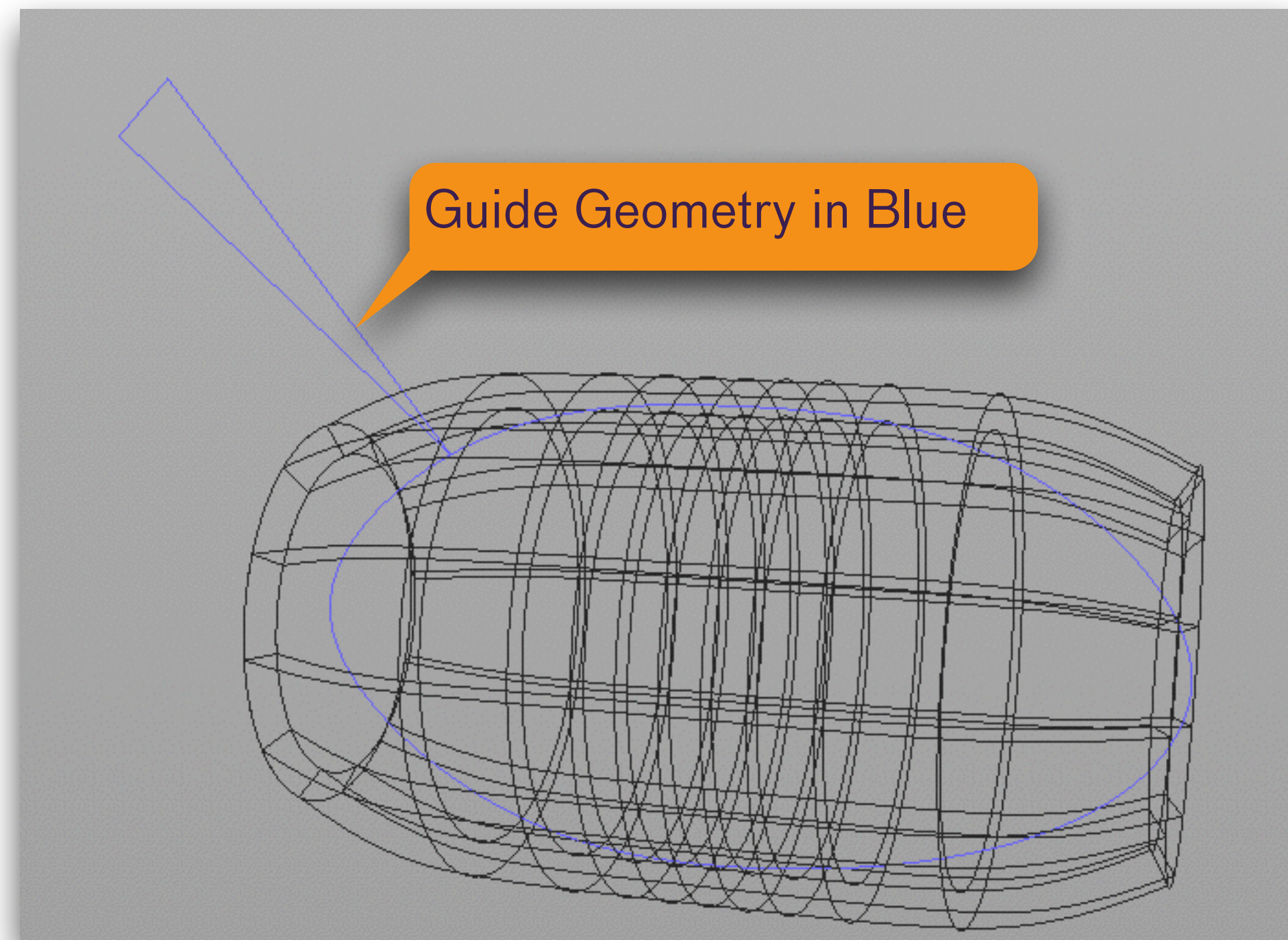
Hollow selected - Thickness
Active



Creating Guide Geometry

Adding to the Capsule Network

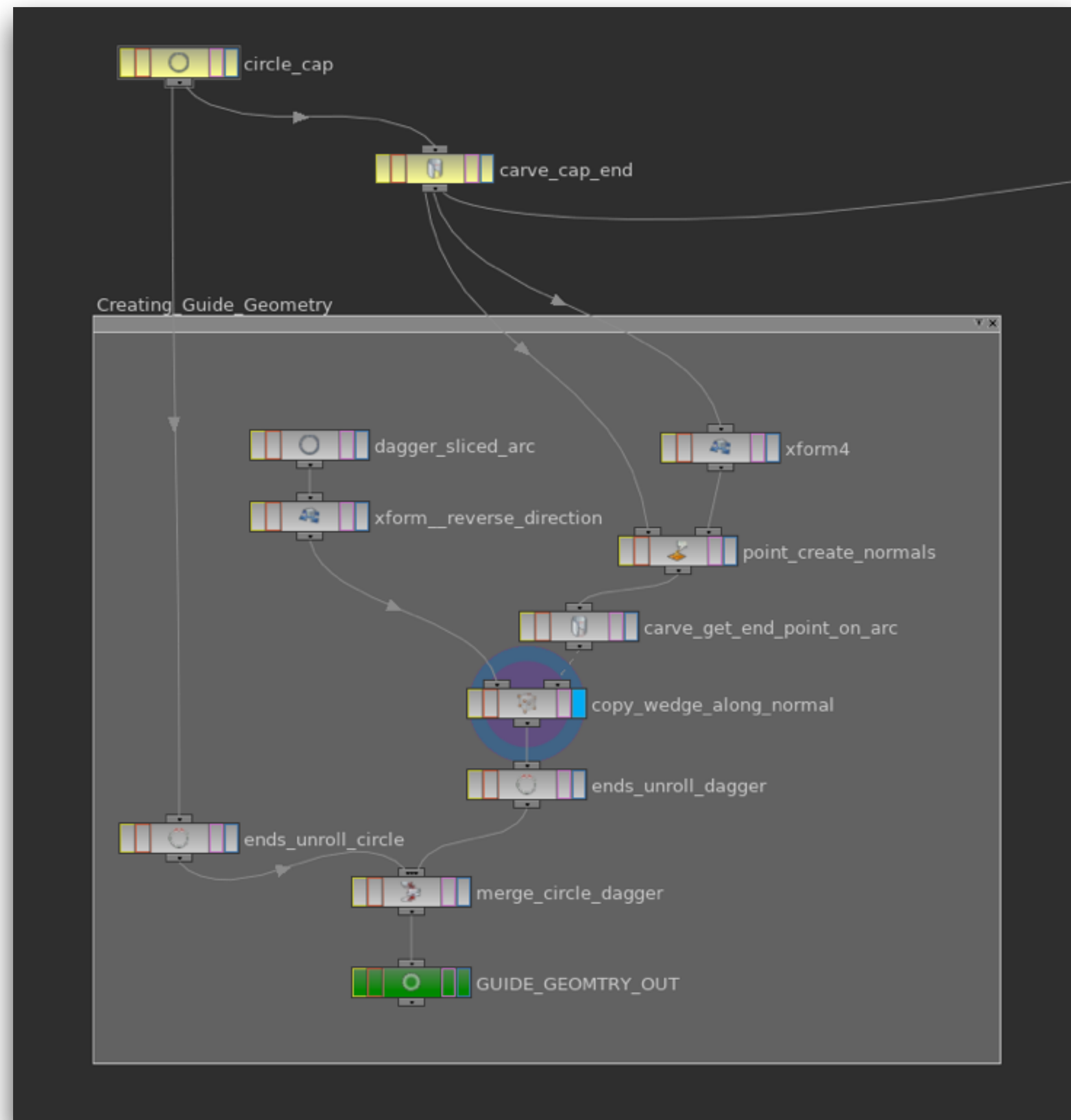
What is Guide Geometry & How Do I Build it?



Guide Geometry helps the Artist visualize the digital asset in the viewport. It can be used together with handles to create a better User Experience

While you can see Guide Geometry in the Viewport it never Renders

Adding to the Network for Guide Geometry



Two Branches

Branch one - Take the circle of the bulge and unroll it to display a wireframe

Branch two - Create a arc that will be used as a pointer to the handle we will be creating

Merge the Two branches

Create a NULL we will point to as our Guide Geometry

Pointing to the Guide Geometry

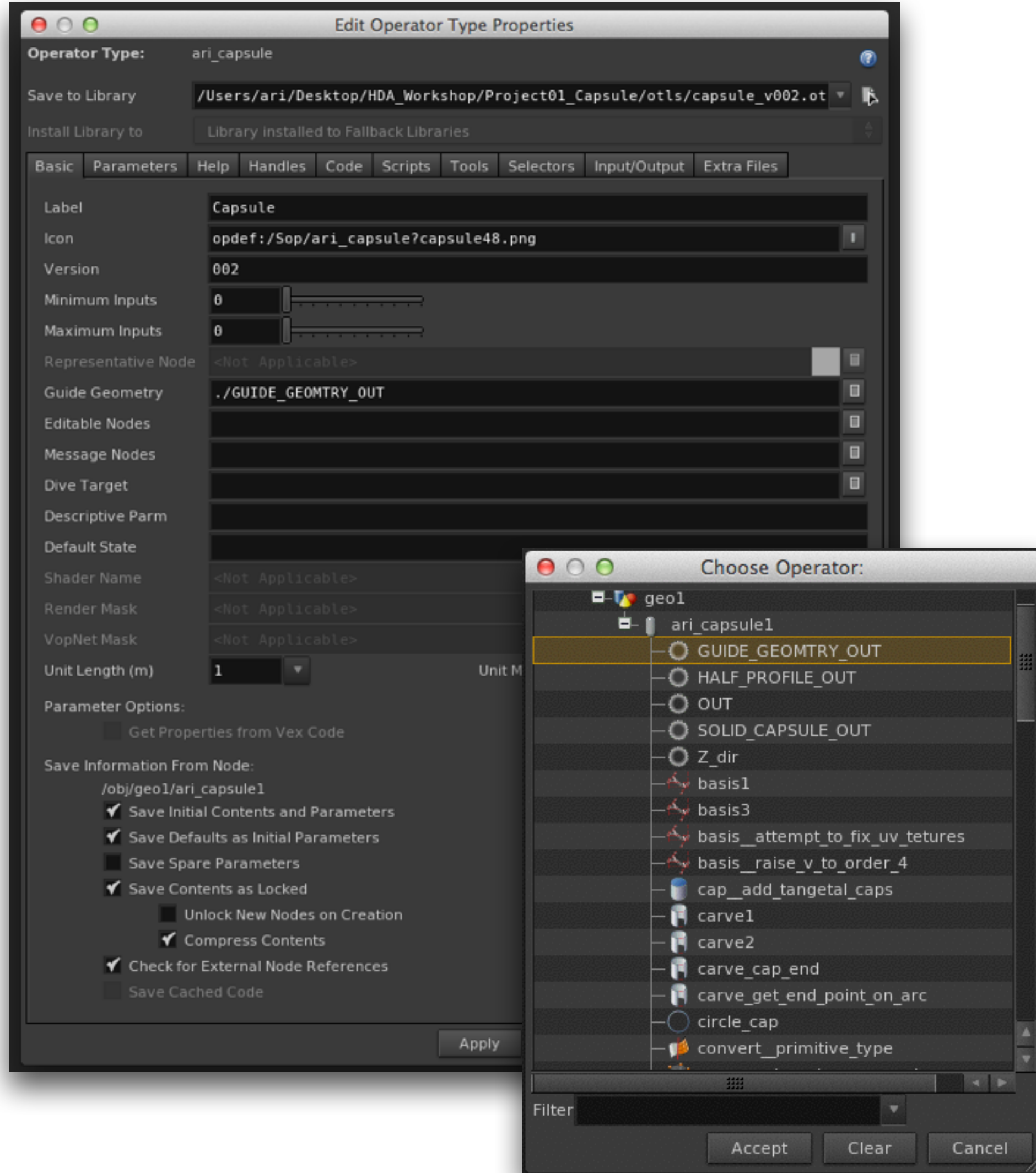
Open the Type Properties Window

Select the Basic Tab

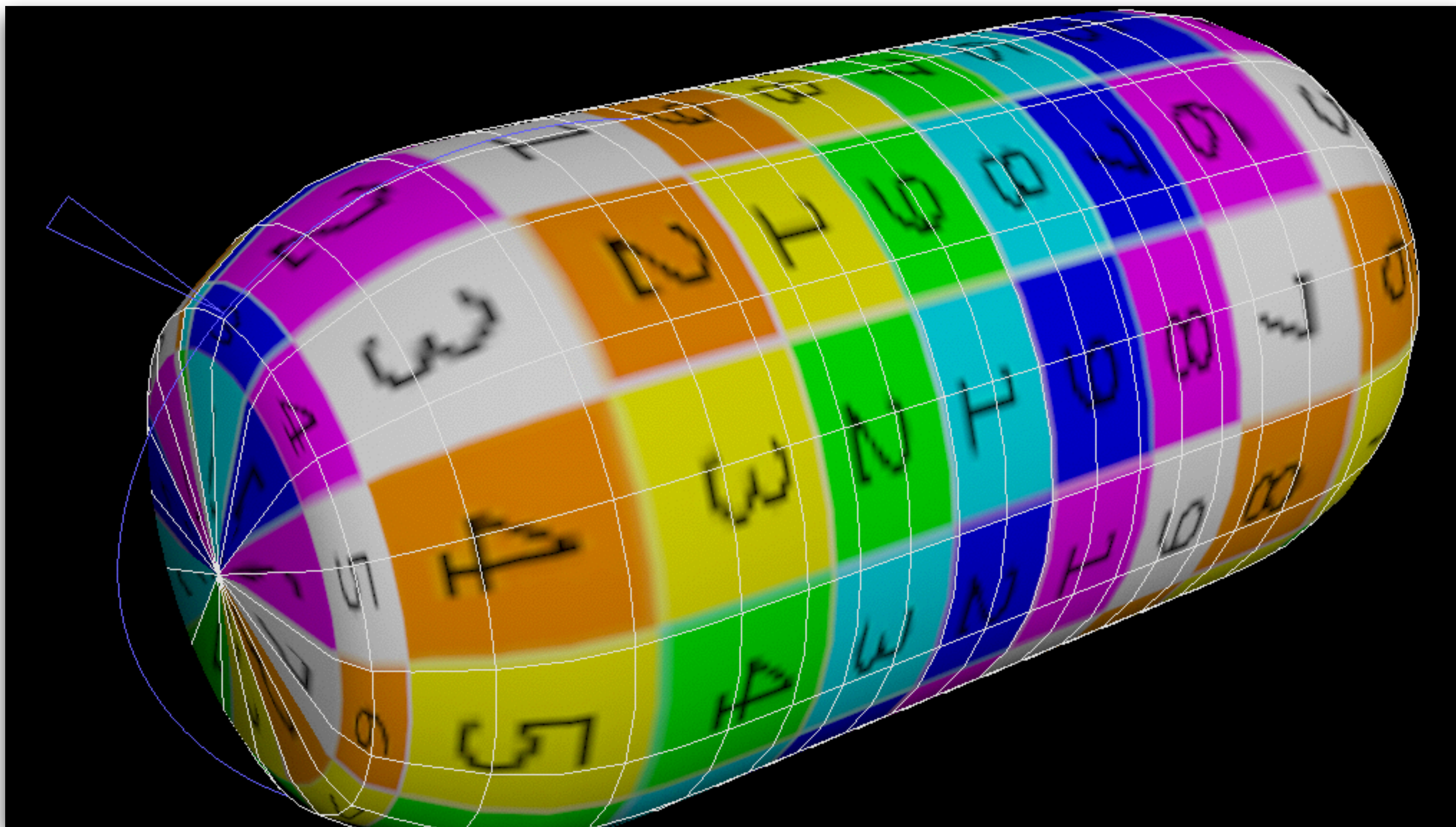
In the Basic Tab click the SOP Selection Icon

Choose “Guide_Geometry_Out”

Select “Apply”



Guide Geometry End Result



SIDE EFFECTS
SOFTWARE



Artist Controls for Radius & Height

Learning How to Create Handles

Handles

Houdini displays controls on objects and components in the viewer called handles, which you can manipulate to set parameters.

Handles are equivalent to manipulators in other packages.

Creating a Handle to Control Radius & Height



Remember

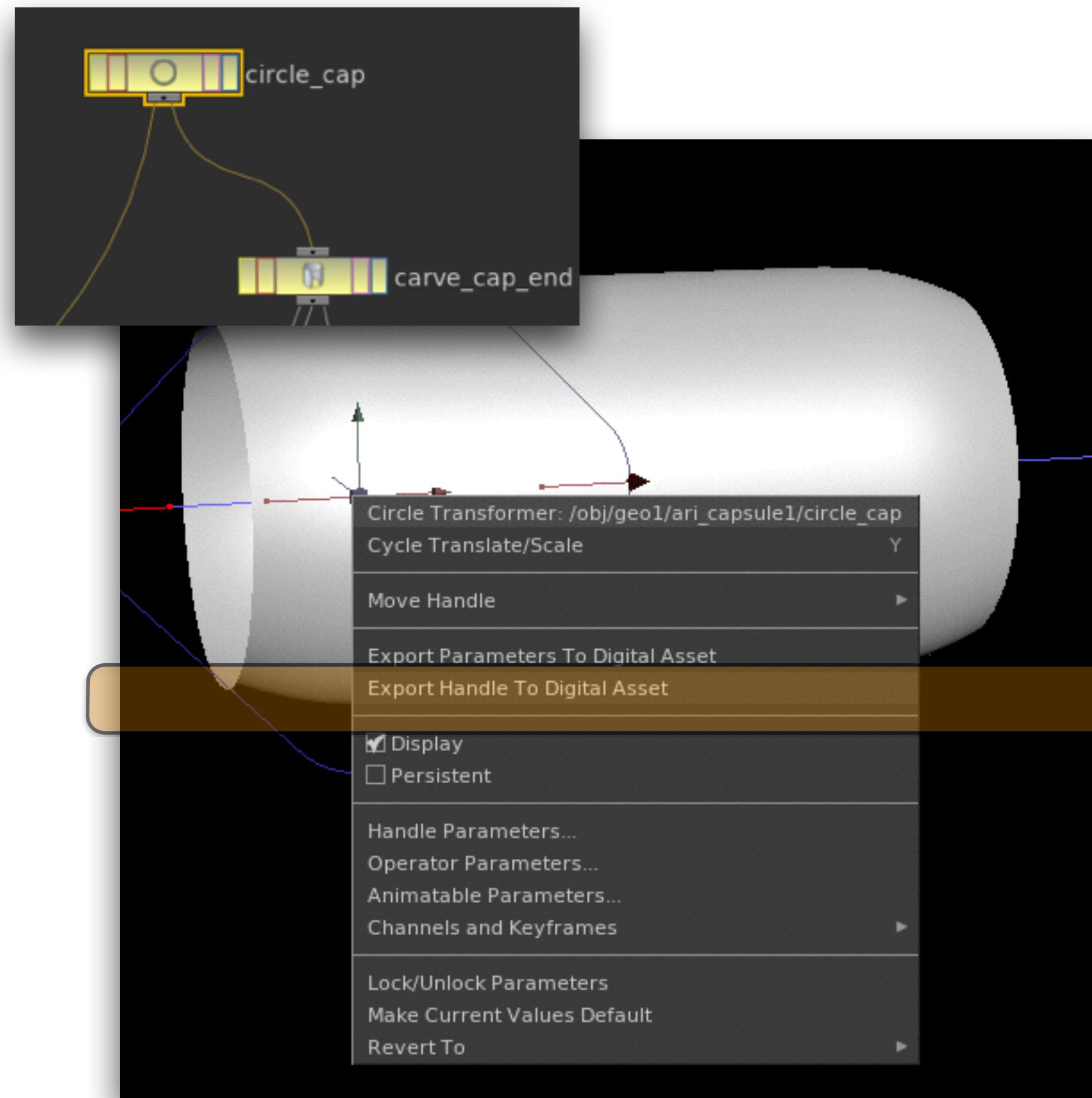
The green colored parameters indicate that they are being controlled by parameters at the digital asset level

We know that Radius is controlled by the rady of the first circle

We know that height is controlled by the tz of the first circle

To create handles for the Radius and Height we will use the viewport
(cont. on next slide)

Creating a Handle to Control Radius & Height (cont.)



Make sure the Type Properties window is open (very important)

Dive into the Network and select “circle_cap” SOP

Now Move over to the Scene Viewport and RIGHT Click on the Transform Handle of the Circle SOP

In the Drop Down menu select Export Handle to Digital Asset

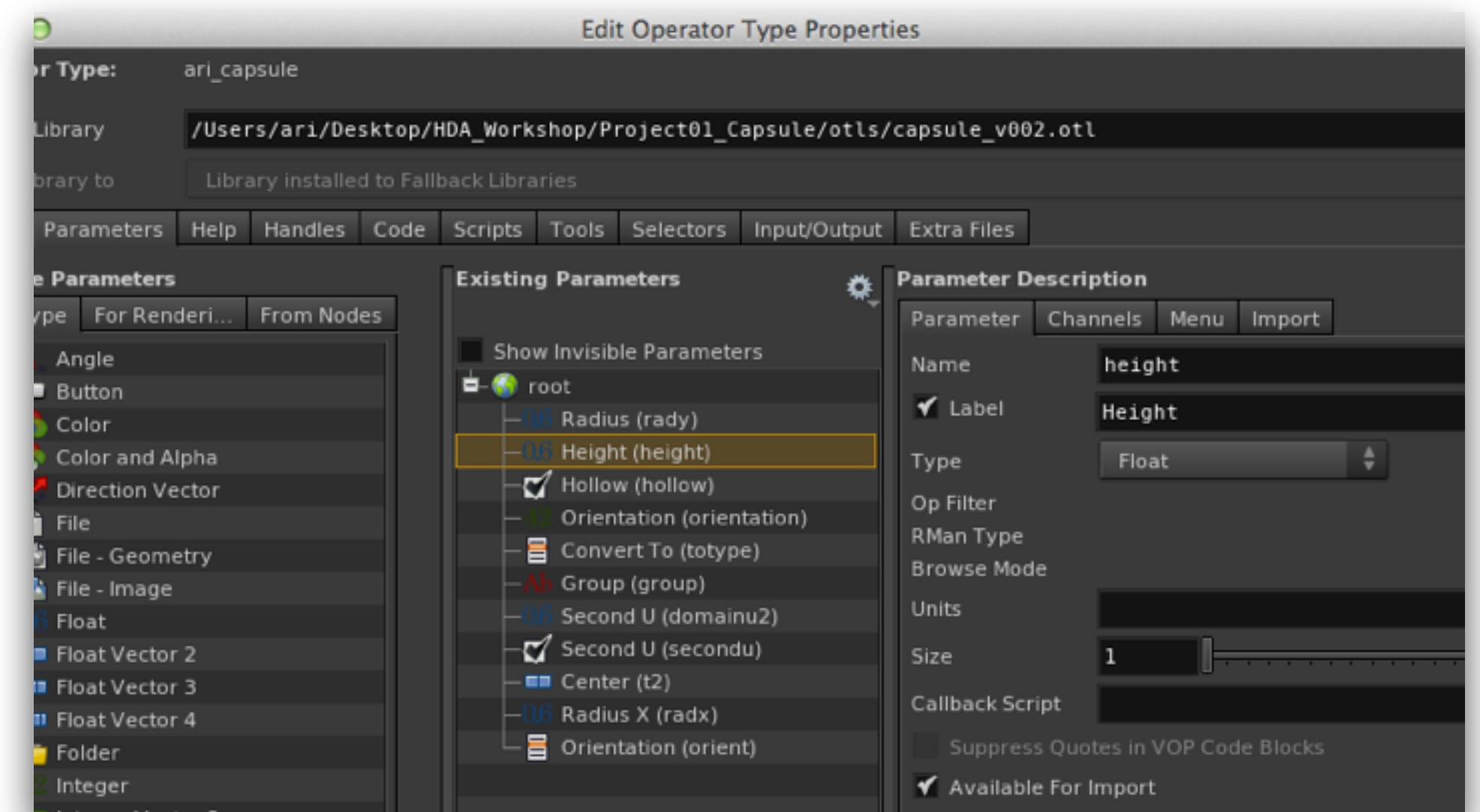
Now let us look at the Type Properties Window

Continued on Next Slide...

Creating a Handle to Control Radius & Height (cont.)

In the Parameters Tab we can see that all the parameters associated with the Circle SOP have been promoted to the Digital Asset

Select the Handles Tab (next slide..)



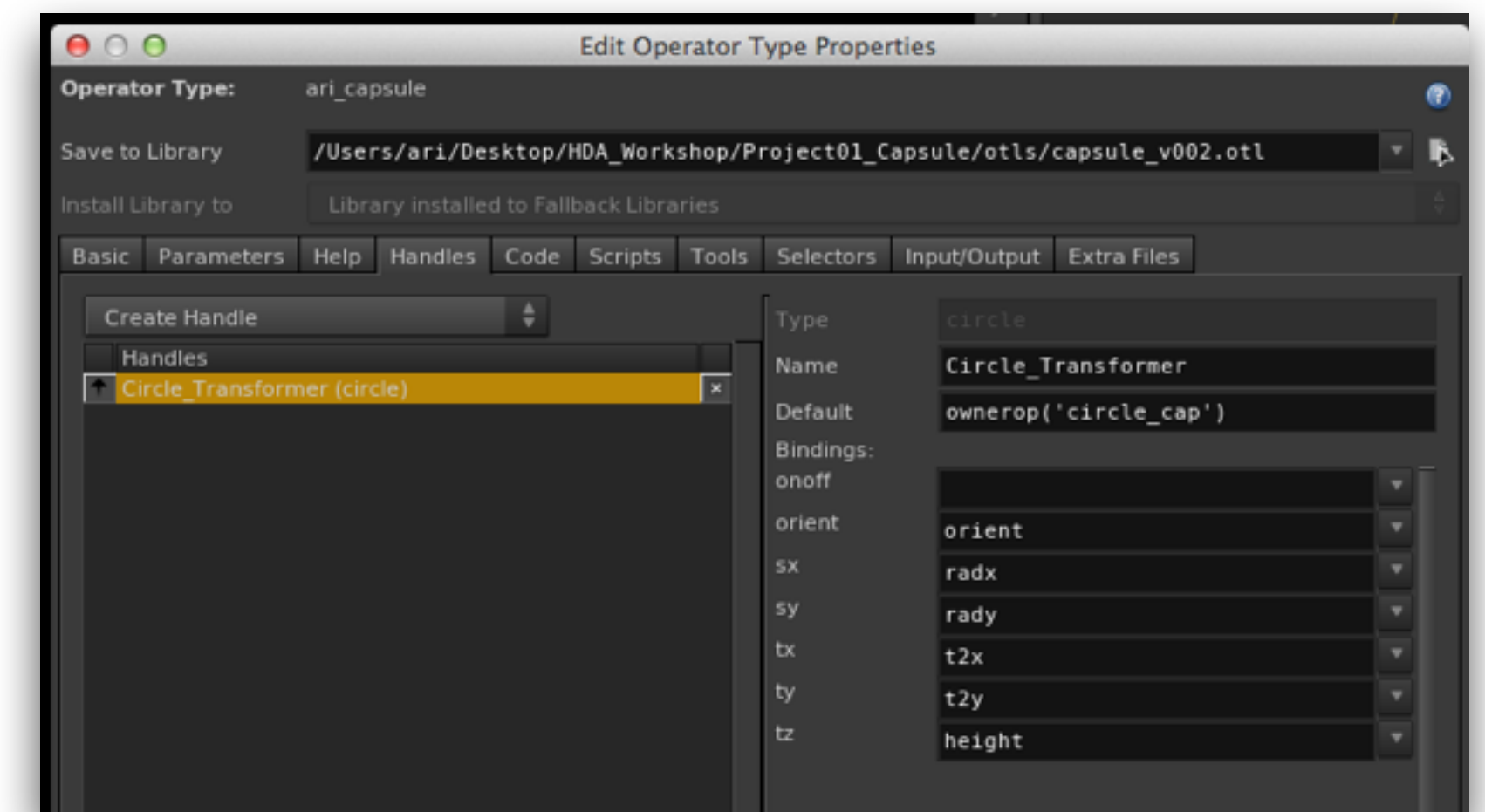
Creating a Handle to Control Radius & Height (cont.)

In the Handles Tab we see a handle has been created

The Name is Circle_Transformer and more importantly it is owned by "circle Cap

We know this because Default - ownerop('circle_cap)

Below this is a list of default bindings. For instance "sx" is bound to "radx"



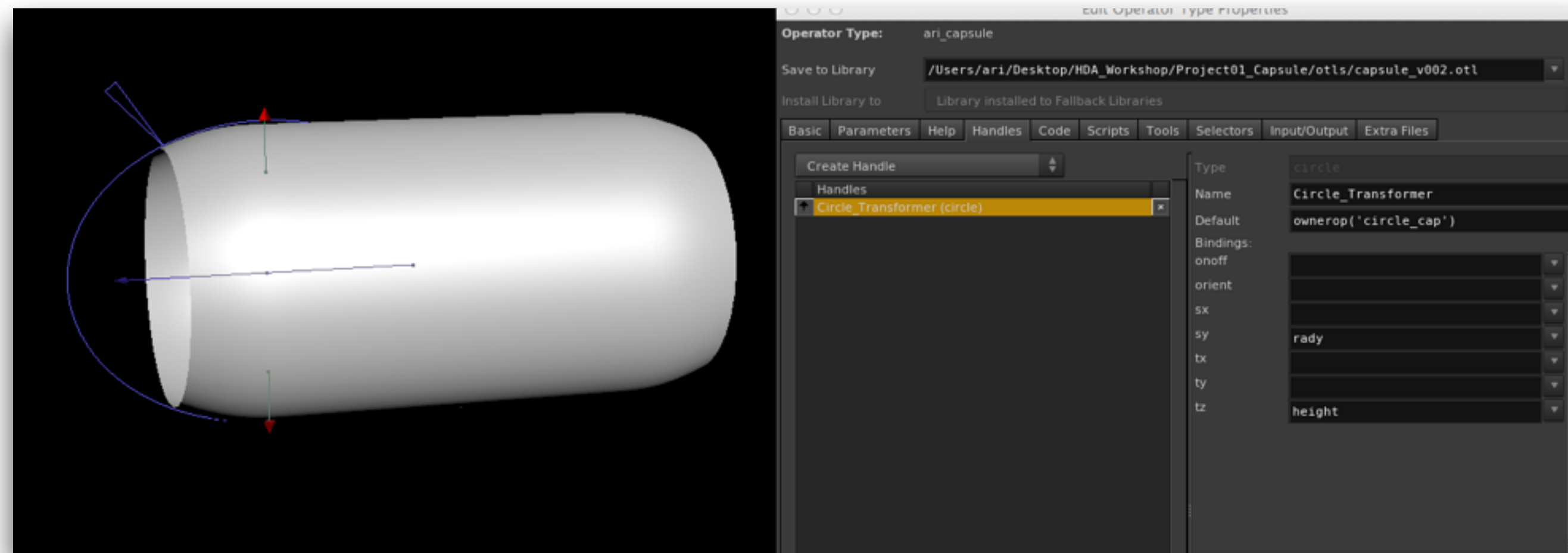
Creating a Handle to Control Radius & Height (cont.)

Delete all the bindings except for “sy” and “tz”

Select apply and test handle

“sy” will control the radius of the capsule

“tz” will control the height





Creating a Handle for Flatness

Seeing How Handles Can Work with Guide Geometry

Creating a Handle For Flatness

We want to control the flatness of the capsule's bulge

We know that the "Second U" of `carve_cap_end` controls the flatness

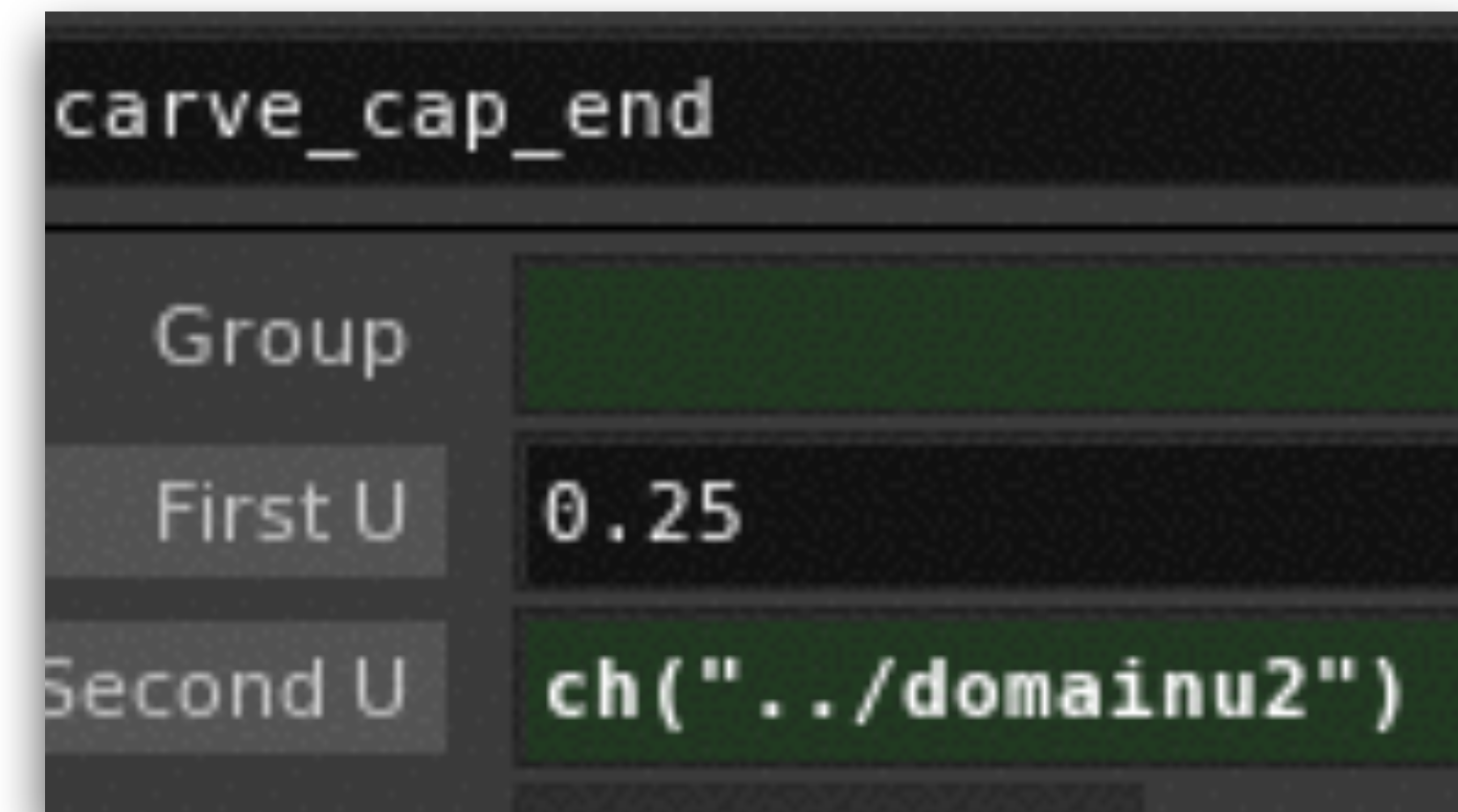
We also know the values must be

min - 0.25

max - 0.5

Make sure the Type Properties Window is Open

Dive into the network and select `carve_cap_end`

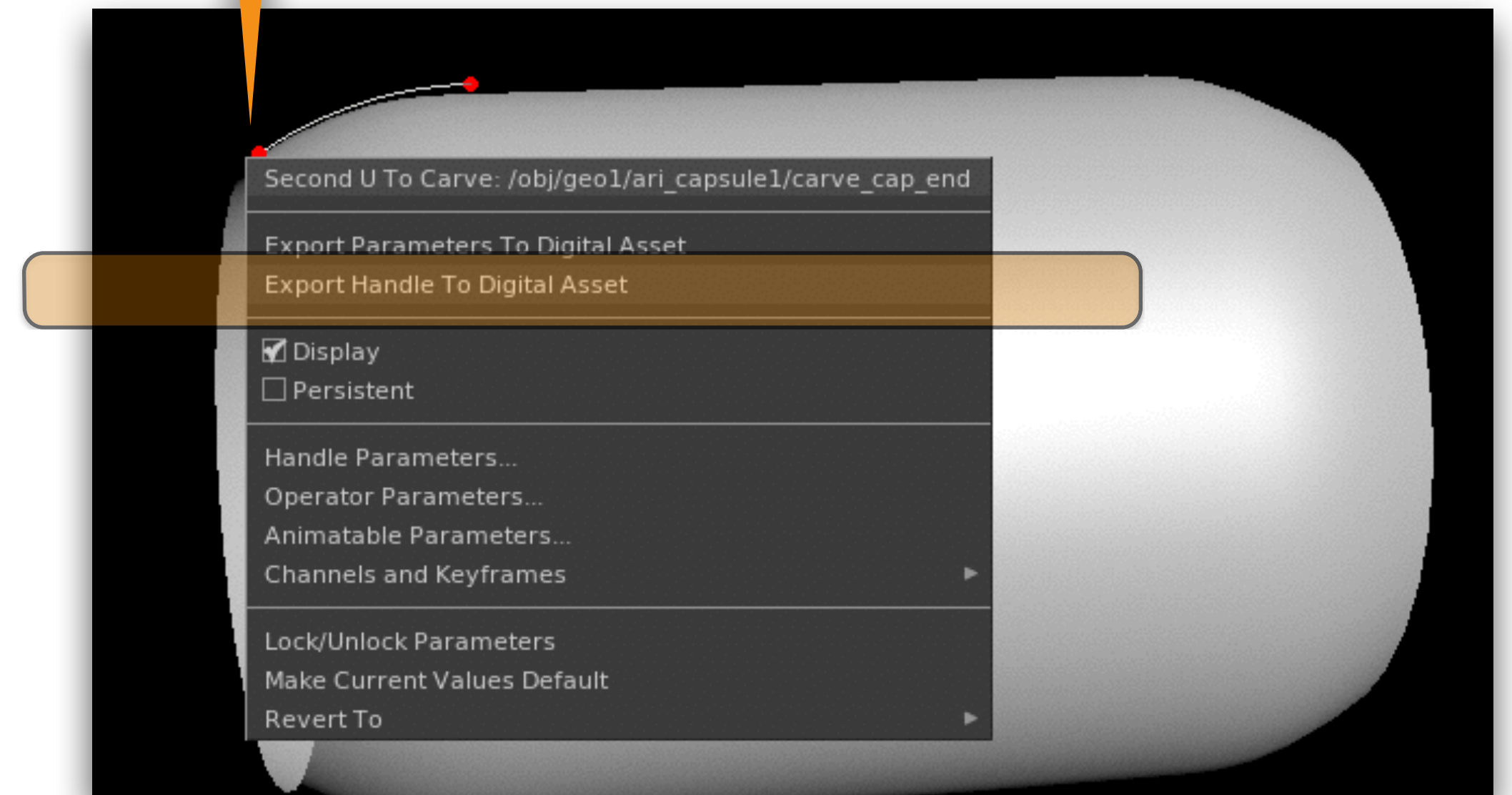


Creating a Handle For Flatness (cont)

With “carve_cap_end” selected hover over the scene viewport and right click on the handle for Second U

Lets View the Type Properties Window

Second U Handle

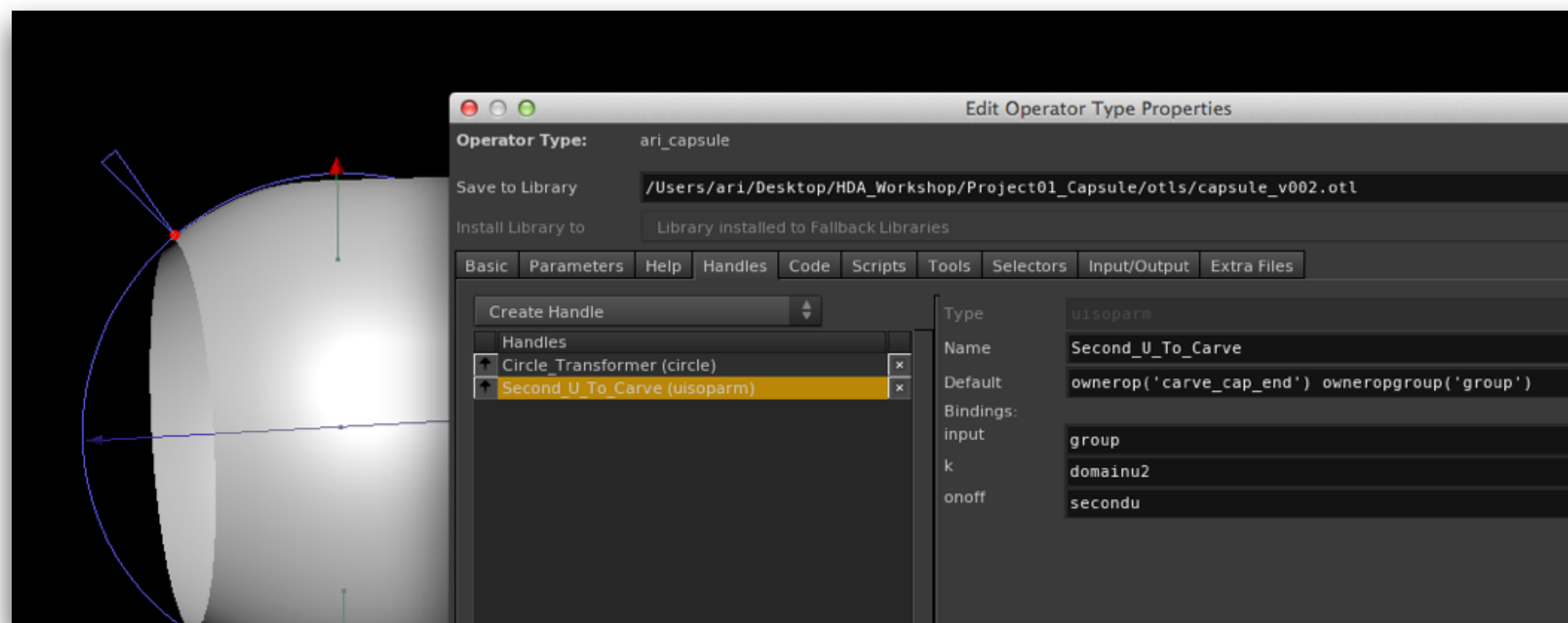


Creating a Handle For Flatness (cont)

Notice a new handle has been created for you - `Second_U_To_Carve`

Go up to the Asset level and test the handle

Notice the dagger moves with the handle

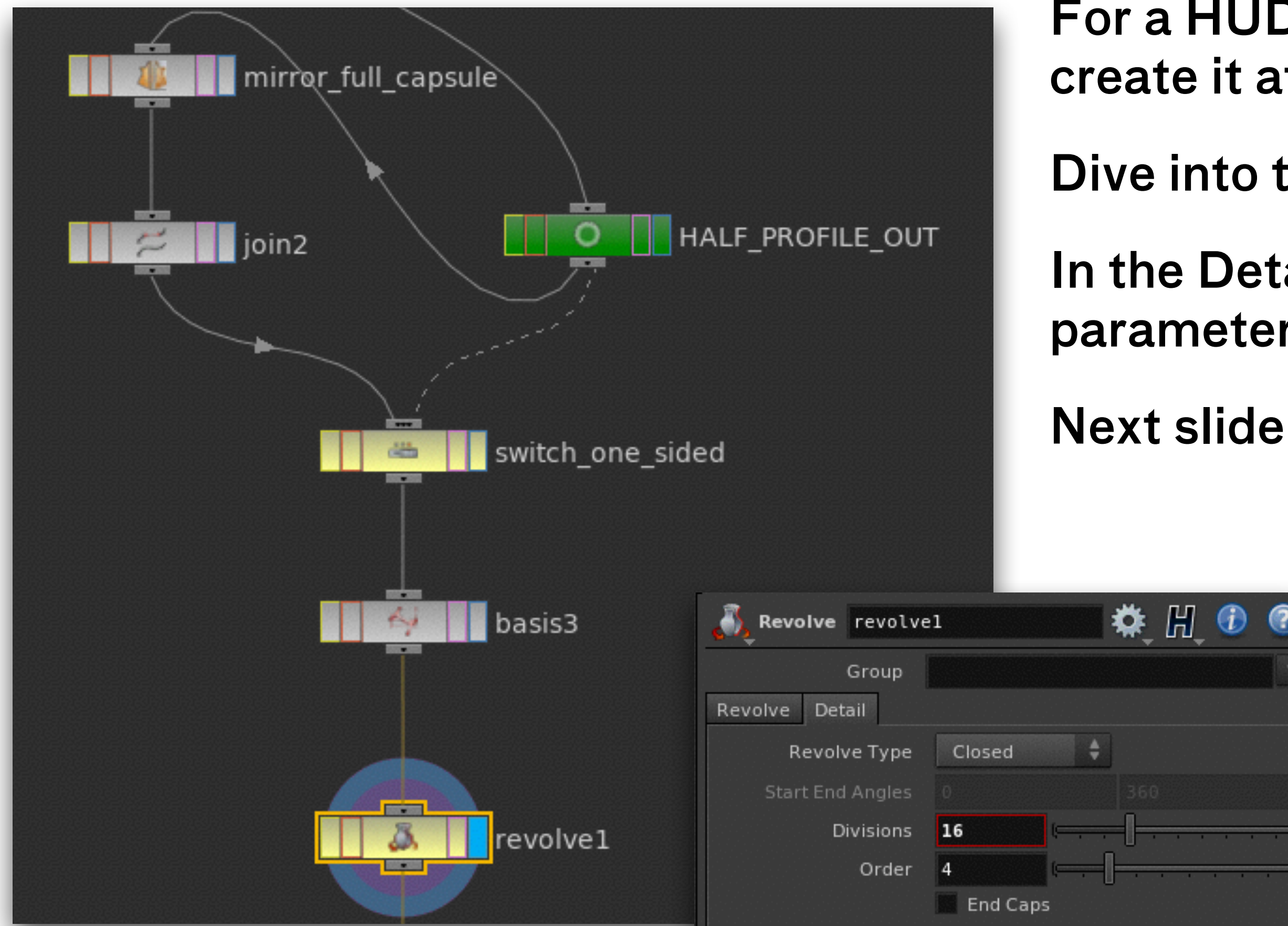




Controlling the Number of Divisions in the Revolve

Using a HUD in the Viewport

HUD Displays



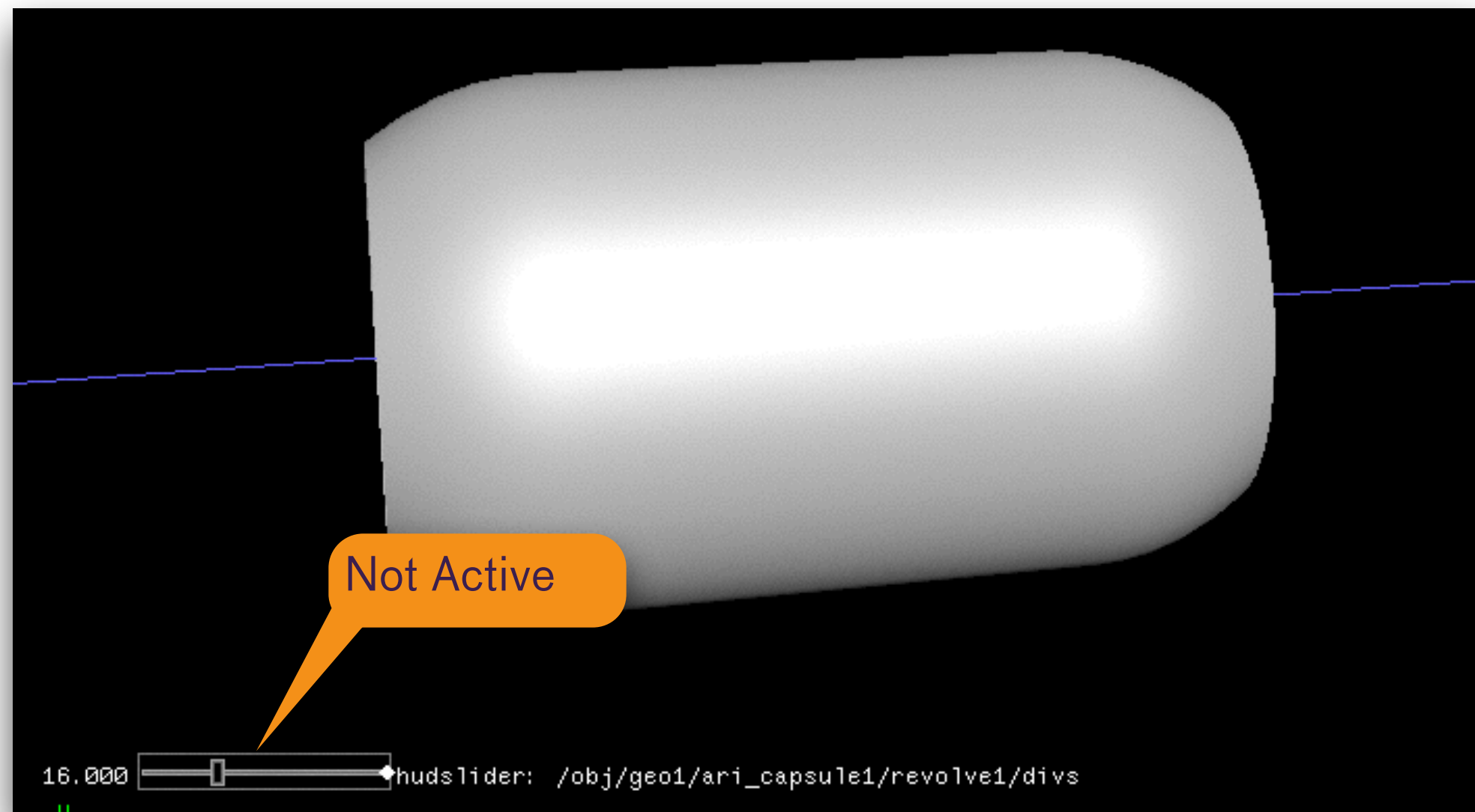
For a HUD (Heads Up Display) to work in the asset you must create it at the network level

Dive into the network and select the “revolve” SOP

In the Details Tab of the Revolve SOP drag the Divisions parameter onto the Scene Viewport

Next slide...

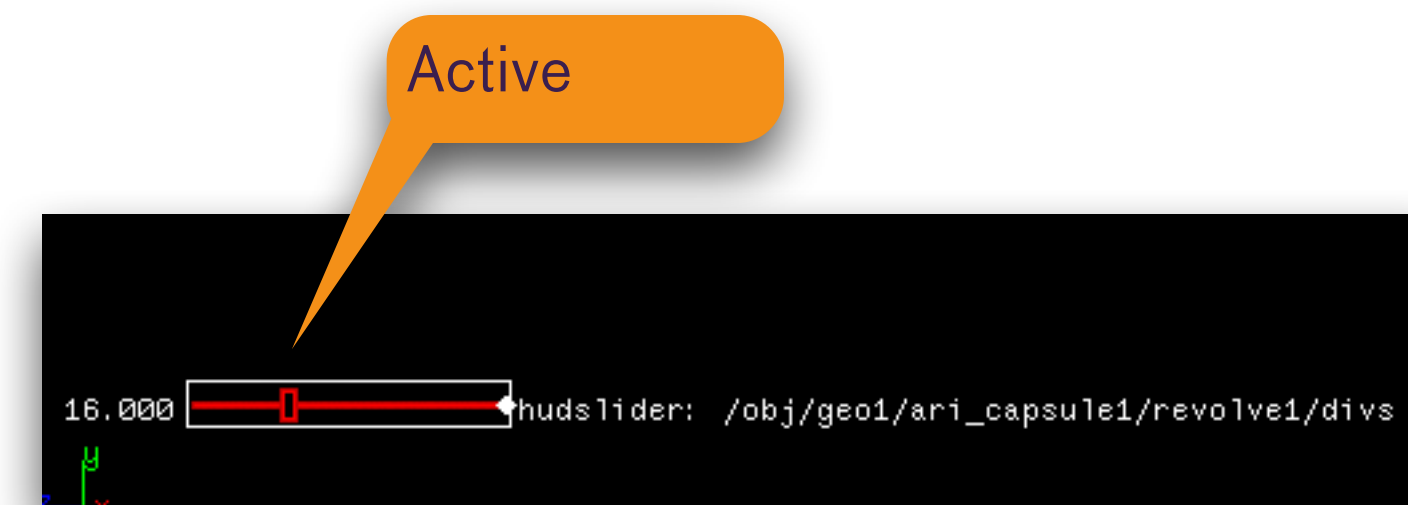
HUD Displays (cont.)



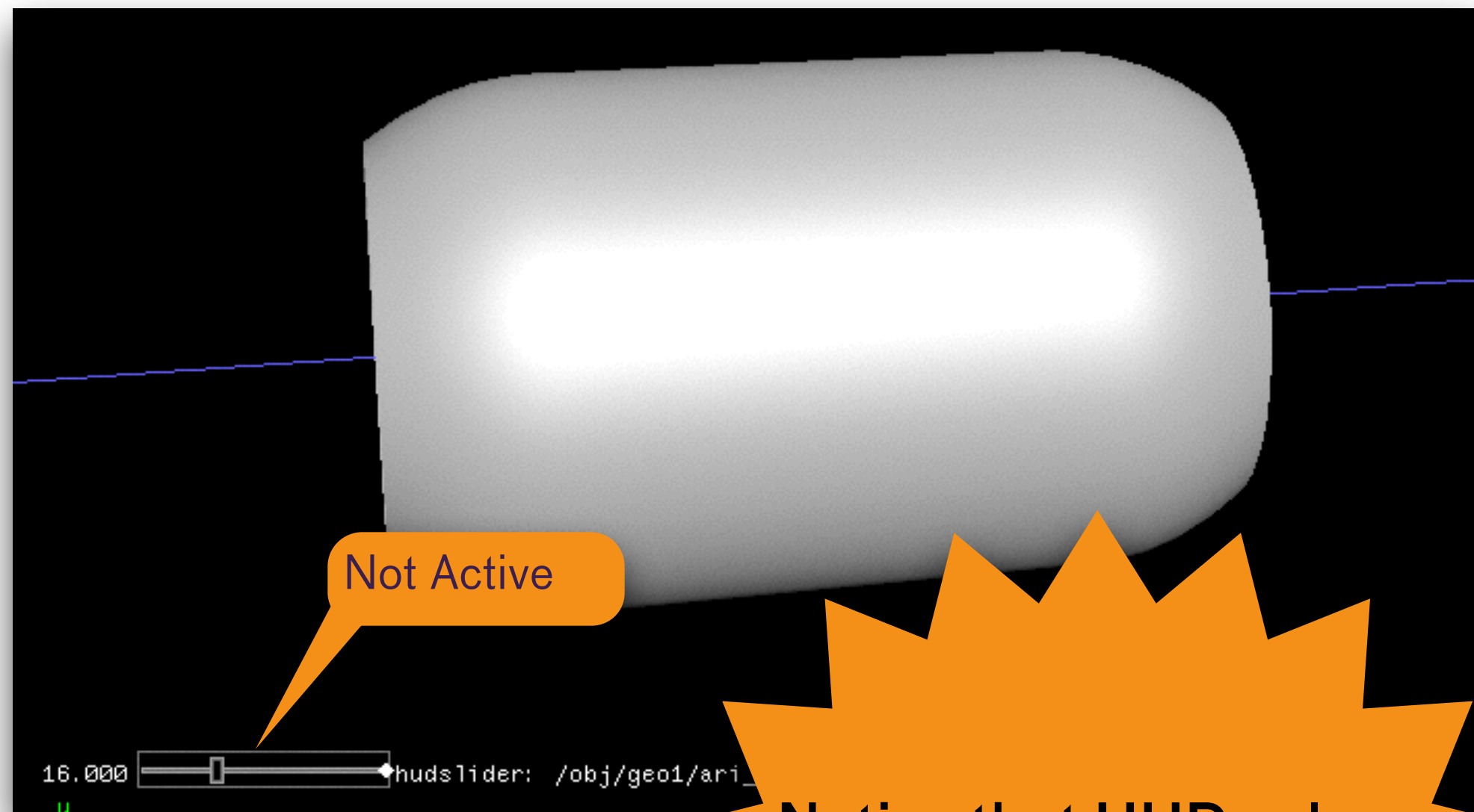
Notice a HUD is now displayed in the Viewport

Activate it by hitting the Enter/Return key in the viewport

The HUD will now appear with a red slider



HUD Displays (cont.)

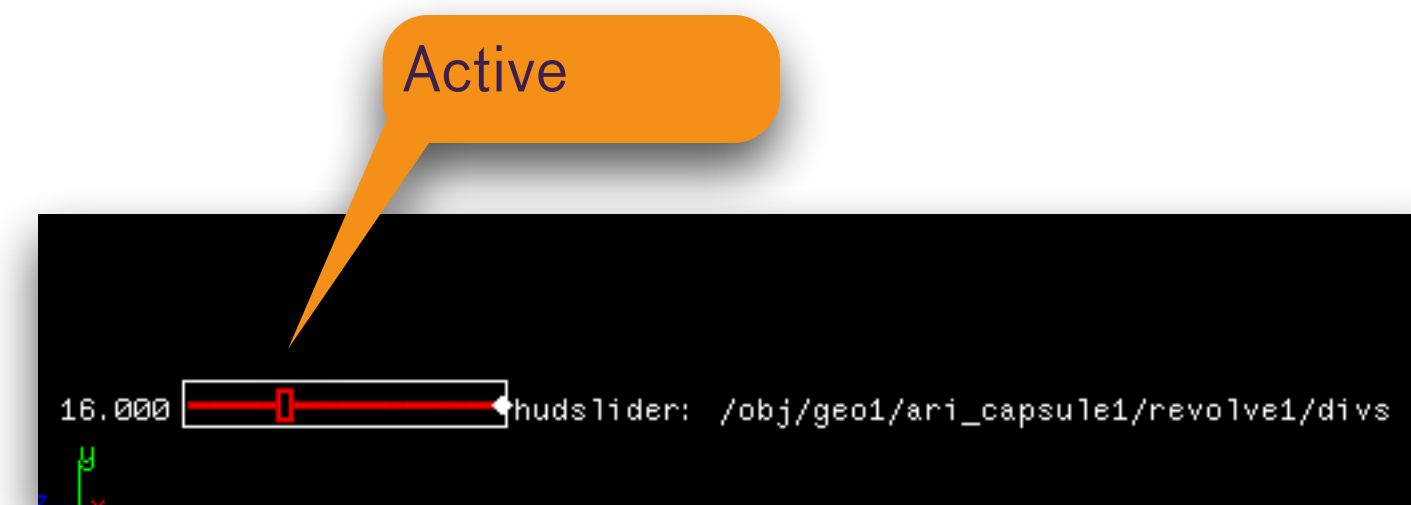


Notice that HUD values are floating points but the Division Parameter is Integer. Houdini is flooring the values in the parameter

Go back up to the Asset level and Test

Activate it by hitting the Enter/Return key in the viewport

The HUD will now appear with a red slider





Creating a Help Card

and Tool Tips too

**SIDE EFFECTS
SOFTWARE**

Creating a Help Page



You can add a help card to your digital asset. Help can be written in three ways:

1. Plain Text - Place it "" "" in tripple quotes
2. Wiki Mark Up
3. HTML

You can also just point to a url that contains the help

Wiki Markup Help

In help if you search for “Writing help in wiki format” you will get full instructions in creating your Help Card



Help Writing help in wiki format

Overview

In the **Help** tabs of custom [shelf items](#) and [digital assets](#), you can type help in straight HTML, or use *wiki formatting*. Wiki formatting is designed to be easier and clearer than HTML.

Wiki formatting lets you write help similarly to how you write email. Instead of using `<p>` tags, you separate paragraphs with a blank line...

```
This is the first paragraph.
```

```
This is the second paragraph.
```

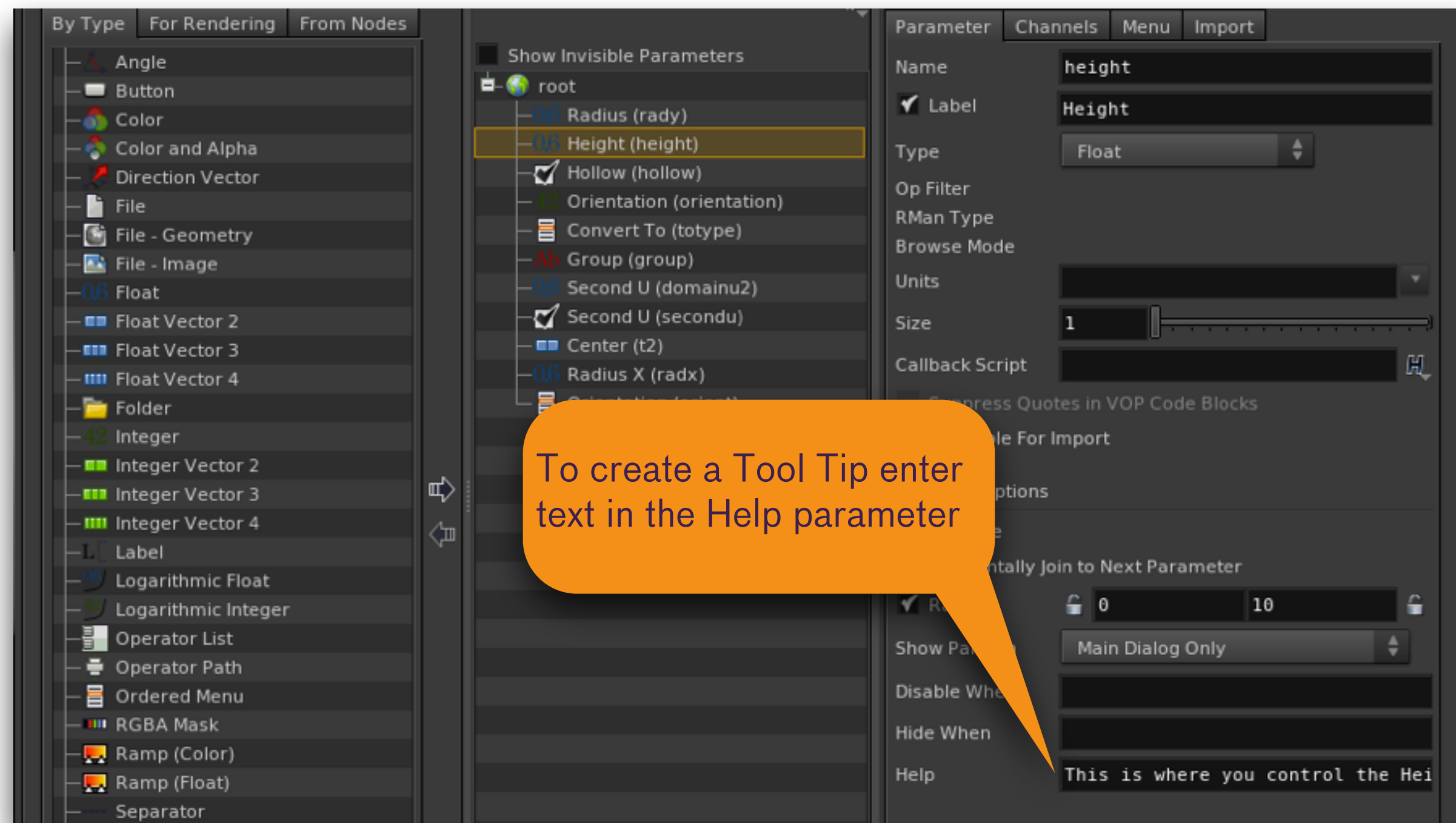
...and you use common email-style formatting for emphasis...

```
Let's put _this bit_ in italics and *this bit* in bold.
```

...and lists...

```
* First item  
* Second item  
* Third item
```

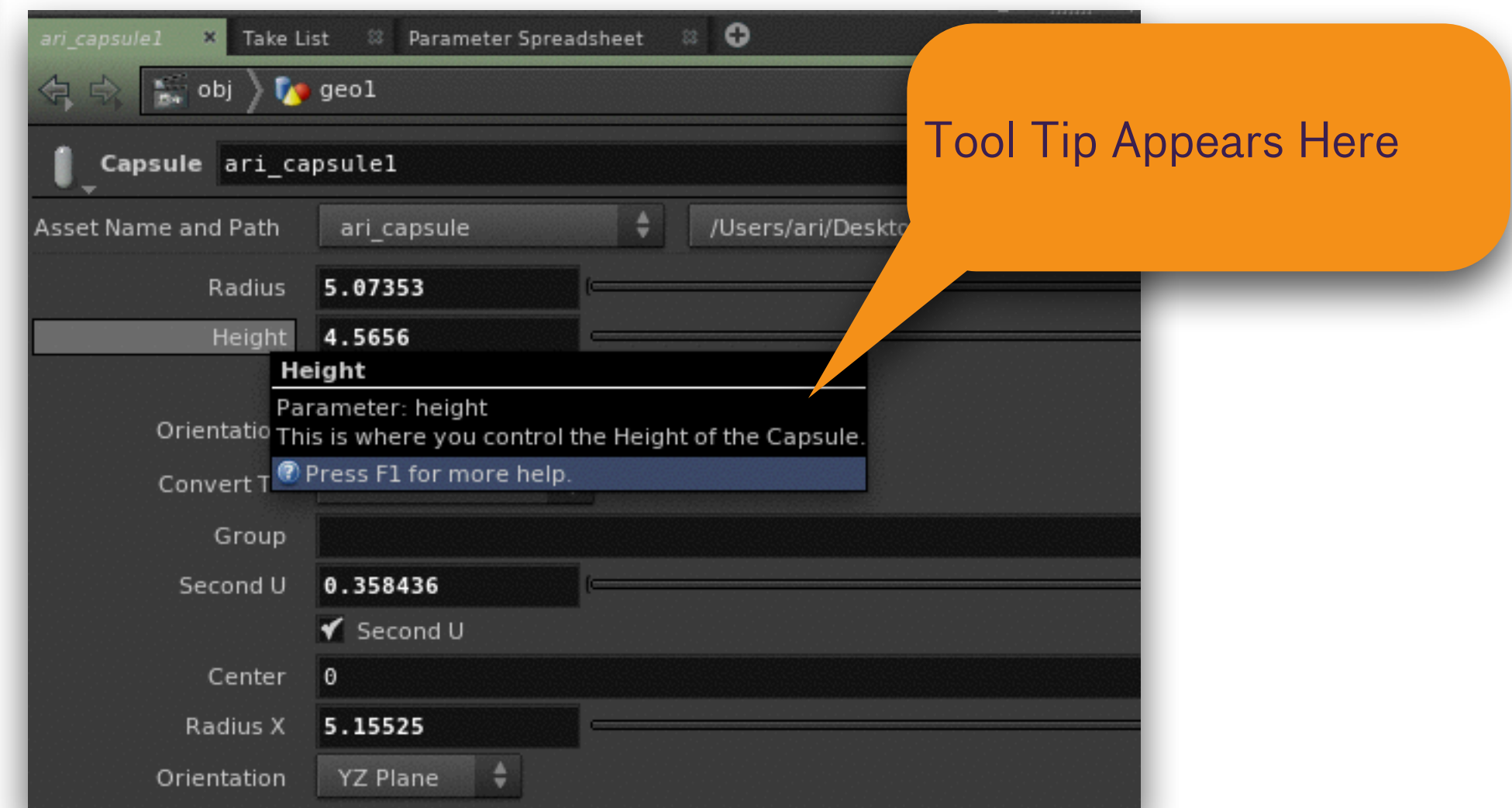

Creating Parameter Tool-Tip Hints



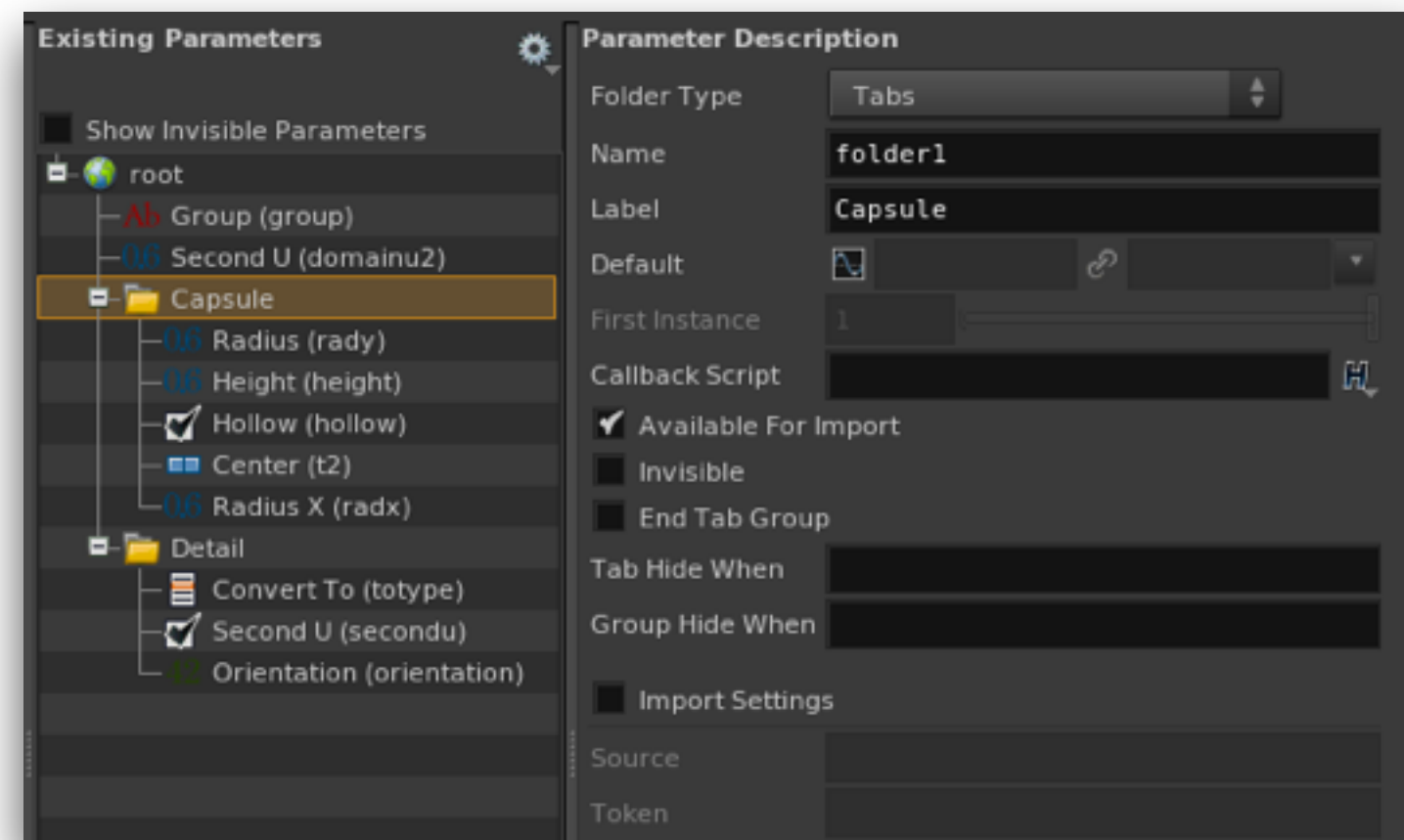
For every parameter you can add a tool tip

A tool tip is a descriptive comment to aid the artist in understanding the parameter

Click Apply and Test



Using Folders to Clean Up the Interface

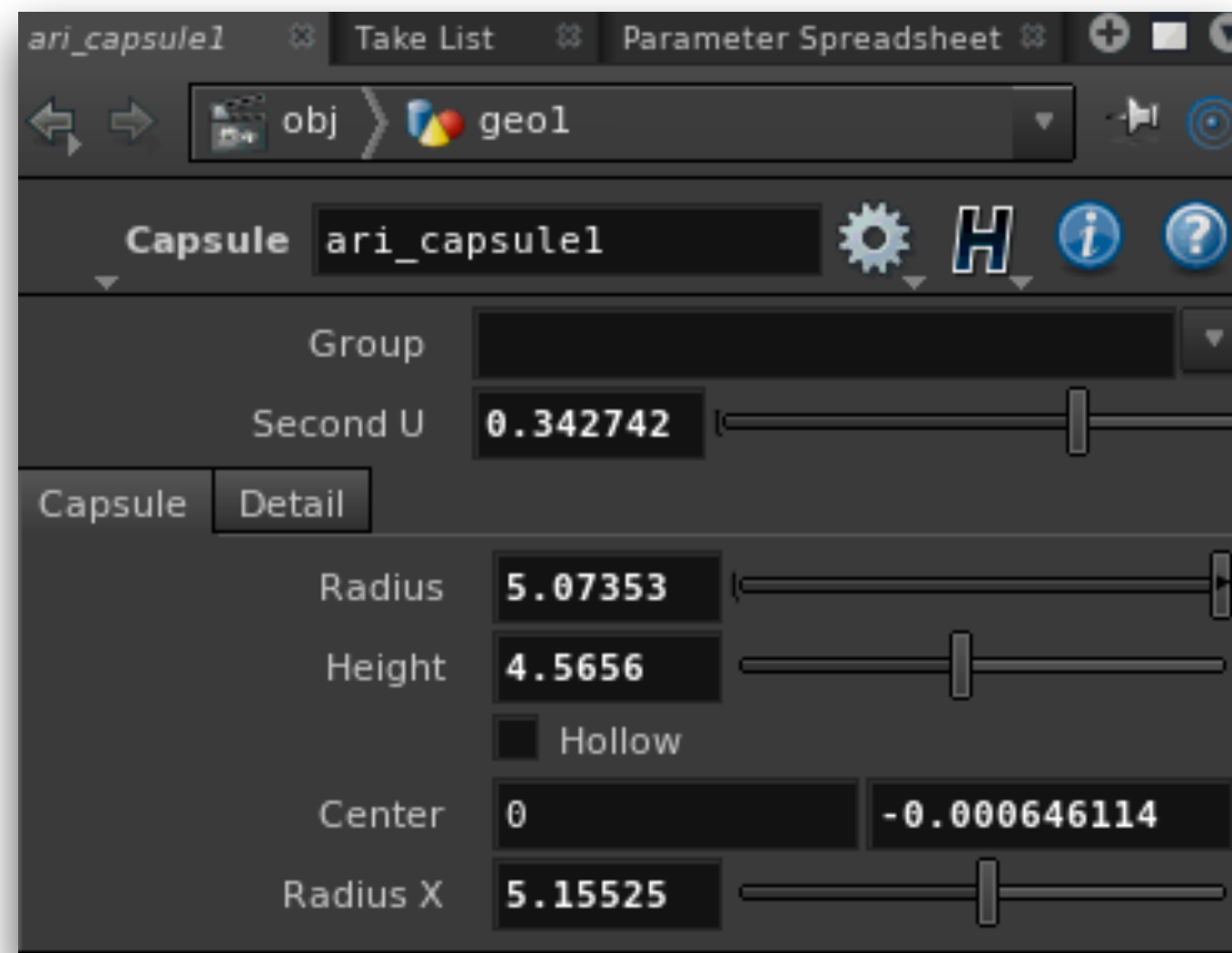


Right now the Interface looks messy

You can use folders to organize the parameters

Folders really look like tabs in the User Interface

Open up the Type Properties Window and go to the Parameters Tab



Drag a Two Folders to the Parameter Side

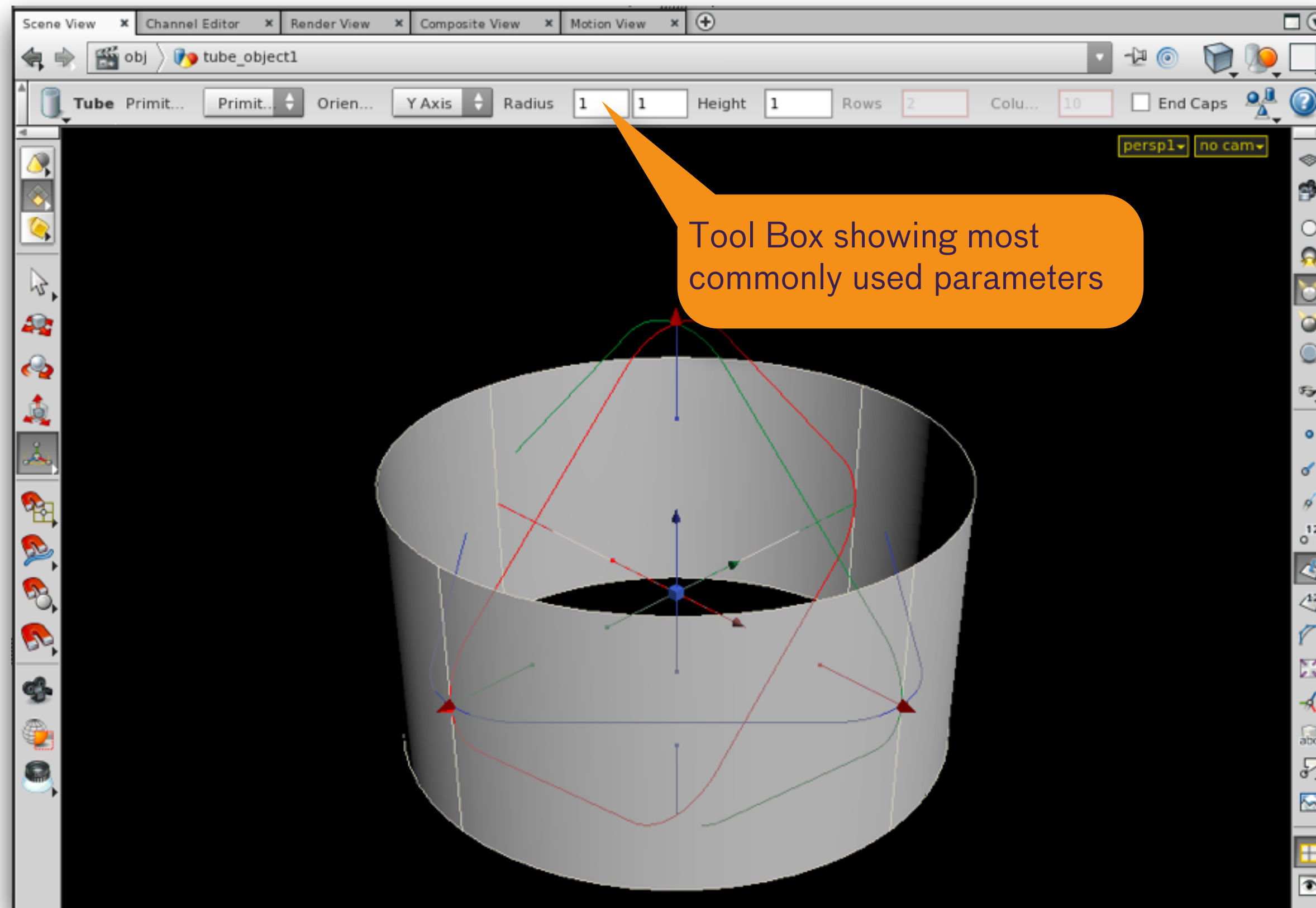
Label the First - “Capsule”

Label the Second - “Detail”

Place parameters under the folders

Click Apply and Test

Promoting Common Parameters to the Tool Box



Let us examine the Tube SOP one more time

Drop down a Tube SOP and Examine the Viewport

Notice above the Viewport there is a “Tool Box” that contains the Tube SOPs most common parameters

We can create our own Tool Box for the Capsule

Promoting Common Parameters to the Tool Box (cont.)

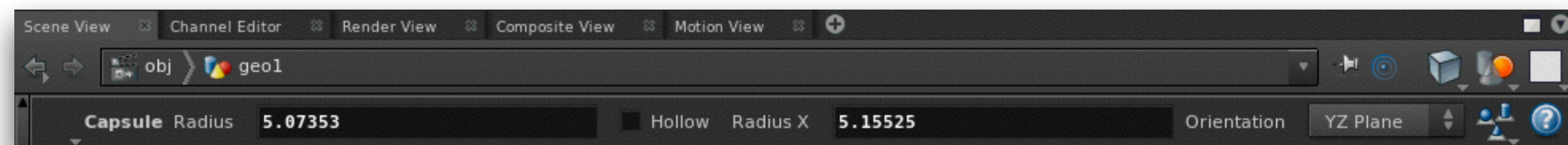
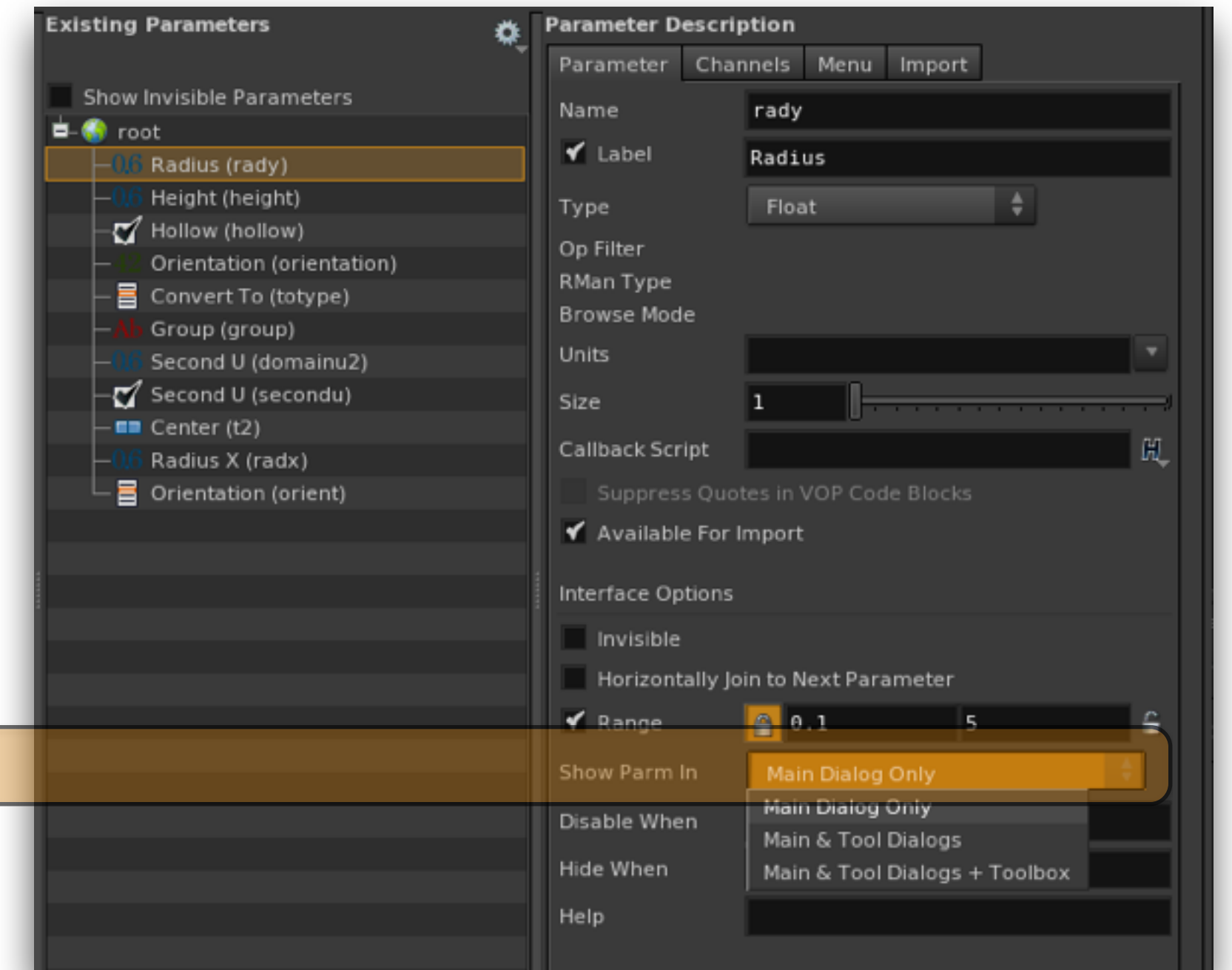
Open up the Type Properties Window and select the Radius Parameter

Underneath the Range Options there is a Field labeled “Show Parm In”

Change it from “Main Dialog Only” to “Main & Tool Dialogs + Toolbox”

Hit Apply. Repeat this for each parameter you want in the Tool Box

Test Results



Promoting Common Parameters to the Tool Box (cont.)

Show Parm In

The dialogs in which the parameter will appear.

Main dialog

Parameter appears in the [parameter editor](#) pane.

Main & tool dialogs

Parameter appears in:

- The [parameter editor](#) pane.
- The mini-parameter editor that appears when the user presses **P** while the operator is active.

Main & tool dialogs + toolbox

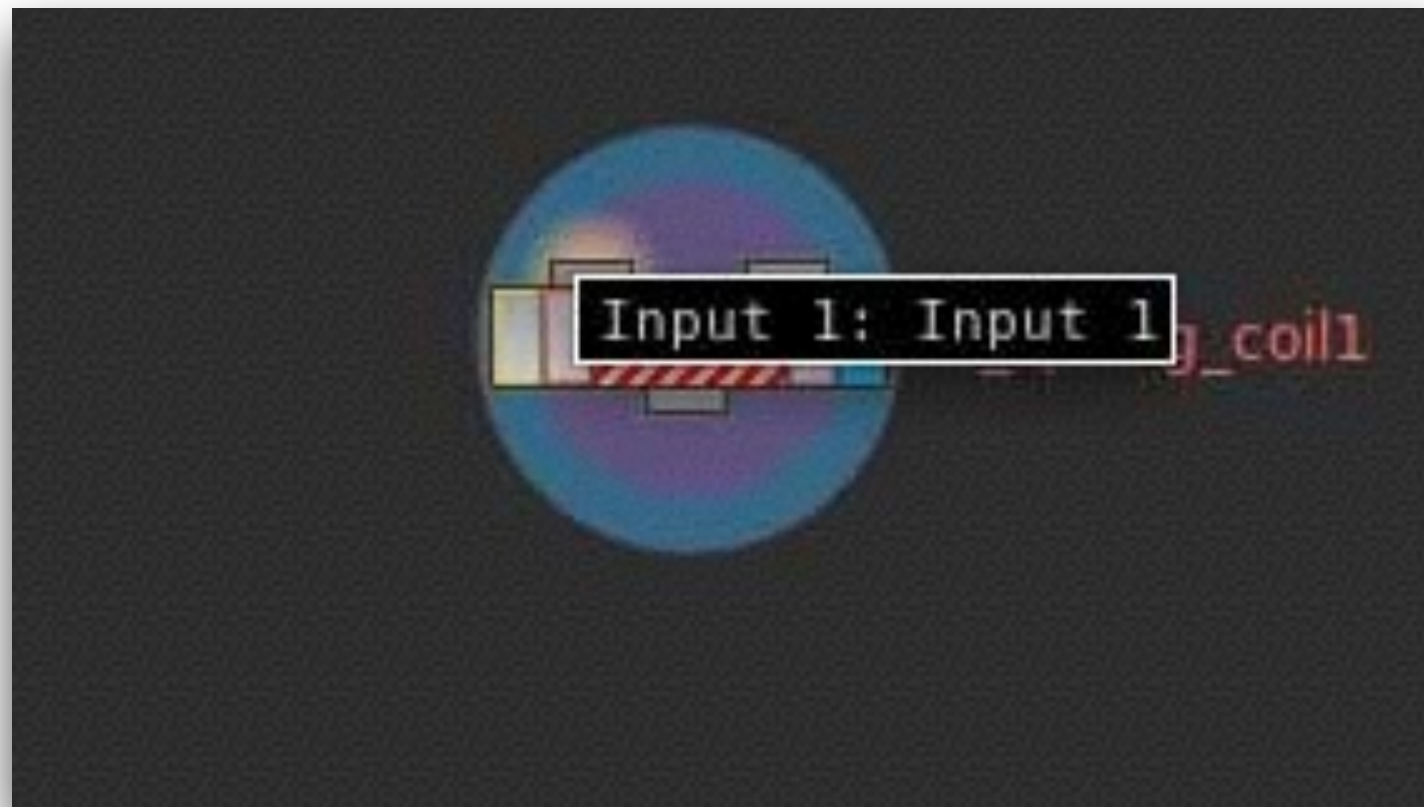
Parameter appears in:

- The [parameter editor](#) pane.
- The mini-parameter editor that appears when the user presses **P** while the operator is active.
- The operation controls toolbar (at the top of the viewer pane) when the operator is active. **Pane > Toolbars and controls > Operation controls**).



Project 02 - Needle Asset

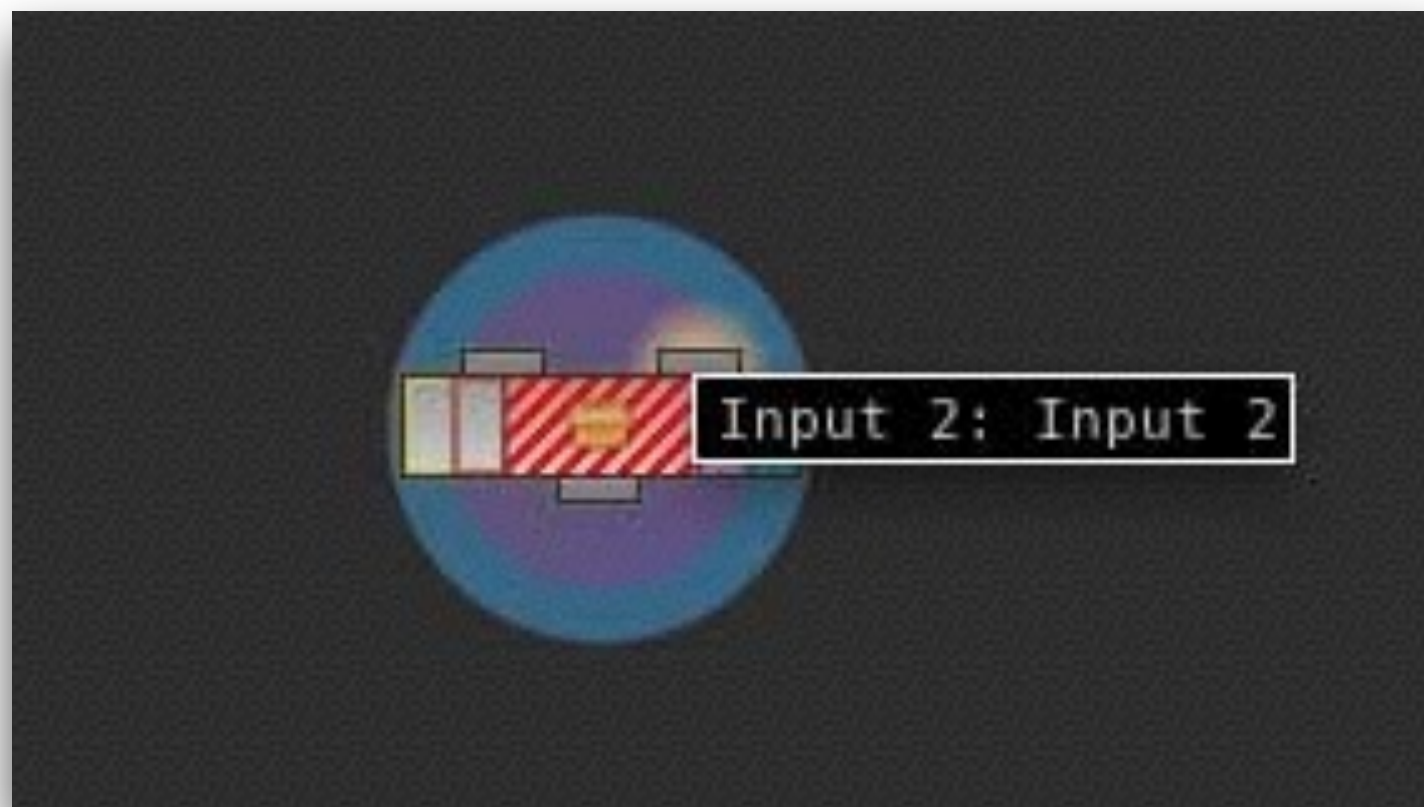
Using the Input/Output Tab to Create Tool Tips for Input Contexts



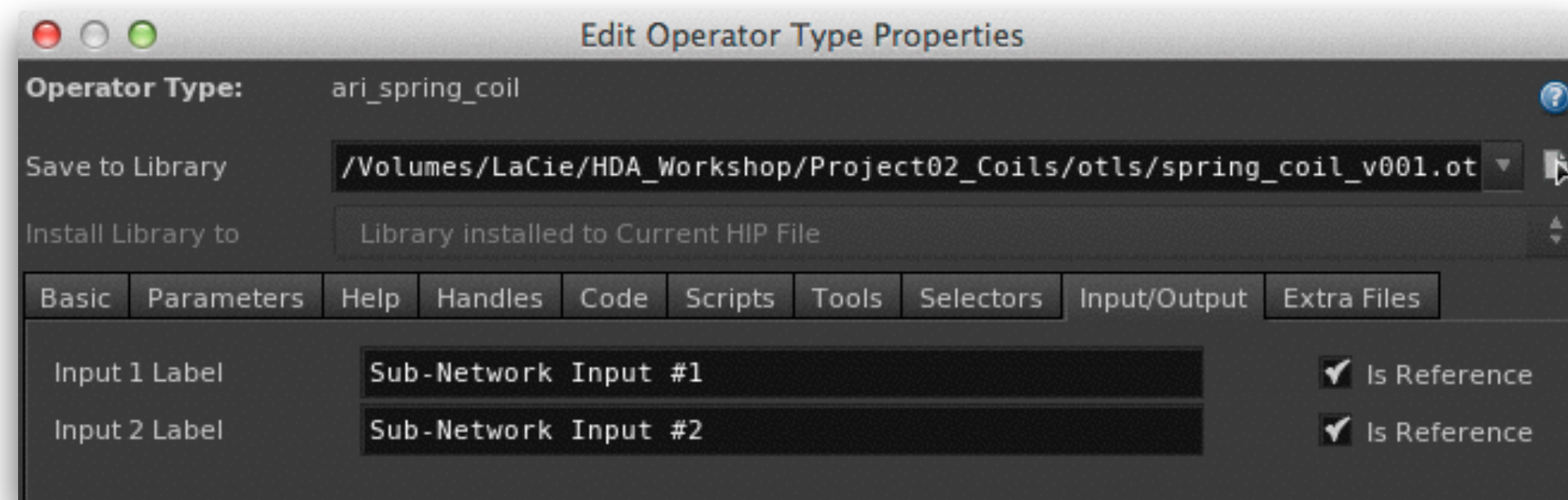
Open up the Needle.hip project

When an artist wants to know how to wire up a node with multiple input contexts he/she will middle click on the context to get a tool tip of what to wire in

Currently our digital asset does not have that information



Using the Input/Output Tab to Create Tool Tips for Input Contexts



Notice when I modeled the Asset I used the Same Context Input Order as the Curve

Open the Type Properties Window

Select the Input/Output Tab

Currently there are no descriptions

Enter in Input 1 Label - Profile Curve

Enter in Input 2 Label - Backbone Curve

Hit Apply and Test



End of Creating Digital Assets - M01