# Additional Content Volume 2: Creating Material ID Maps

In this **Online Tutorial** we will learn how to quickly create **Material ID Maps** in **Blender** .

We will be covering the following main topic:

- Learn how to Fill areas of your Model with Colors to create a Material ID Map

At the end of this Online Tutorial, you will understand how to create your very own Material ID maps.

Let's first start with an introduction to the concept of Material ID Maps

## Technical requirements

The following is the technical skills and software you would need to complete this chapter.

- A computer that can run basic 3D animation software.
- Have a basic understanding of how to navigate and manipulate meshes in Bender. This has been covered in *Chapter 1, Introduction to BLENDER'S 3D Modeling and Sculpture Tools*.
- You need to have installed **Blender** (Open-Source Software) from: https://blender.org/ (At the time of writing). The Blender version in this chapter is 2.93.5. Even if your version of Blender is newer, the examples should still work without any problems.

# What are Material ID Maps, and why is it needed?

These kind of maps are used to assign a color to parts of your Model that you want to apply a specific Material to. Mixer and other 3D Software like Substance Painter and Marmoset Toolbag, can use these Texture Maps during Procedural Texturing.

For example, Imagine you have a 3D Model of an Car. This 3D Car is made from four types of Materials. Car body = (1) Painted Metal, the Tyres = (2) Rubber, Hubcaps = (3) Chrome and Windows = (4) Glass. So in this case you would assign four colors to parts of the Model where these Materials would be. This would later be used to make selection of these parts easy and allow you to apply for example the Glass to the Windows and not on the whole Model.

So now that you understand the concept, let's dive into the creation of these Material ID Maps.

# Let's create a Material ID Map in Blender

0. Load the Robot-Drone into Blender and switch to the **UV Editing Workspace**
1. Switch to Edit Mode and in Edges select mode , press *A* to select all the Edges on the Model. Also **select all the UV's in the UV Editor** by using the select Box.
2. In the **UV editor Window**, click on **UV** and select **Seams from Islands** in the drop-down Menu.
3. This will re-assign the display of the **UV seams** on your Model. (We will use these UV Seams later on in this Tutorial.)

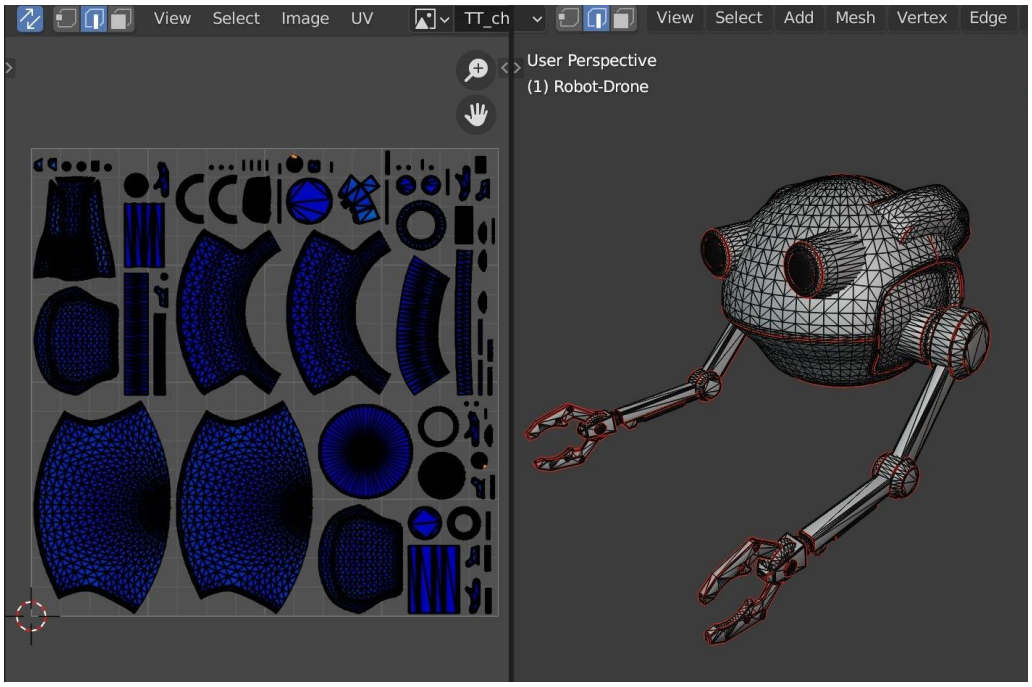


**Figure 1.1: UV Seams enabled on the Model**

4. Click on the **Texture Paint Workspace**

5. The Model will be displayed as Purple to indicate that it does not currently have any Textures assigned to it. In the Properties Panel change the Mode to **Single Image**. As seen in *Figure 1.2*

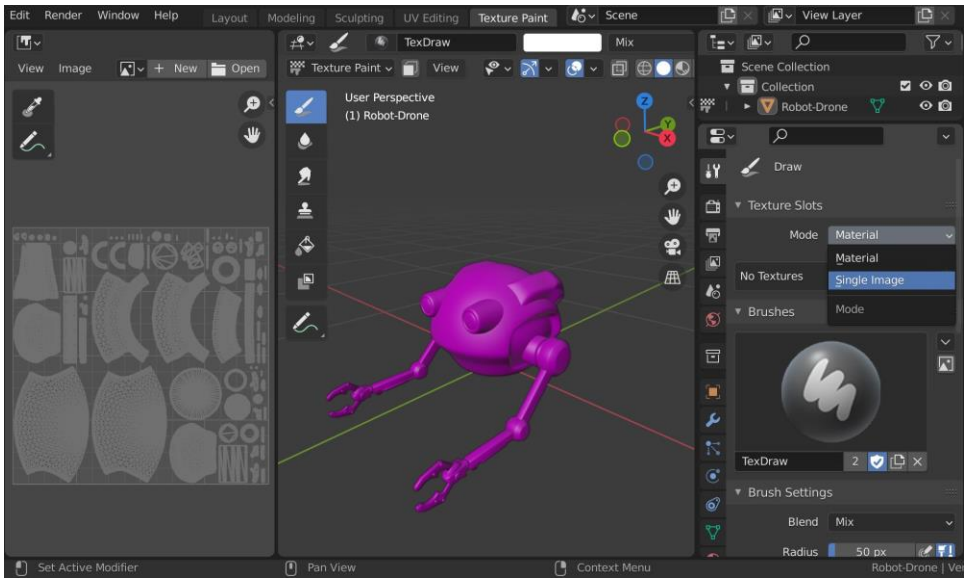


**Figure 1.2: Setting the Mode to Single Image.**

6. Next, click on **New** to bring up the **New Image Window** . Set the settings like in *Figure 1.3*

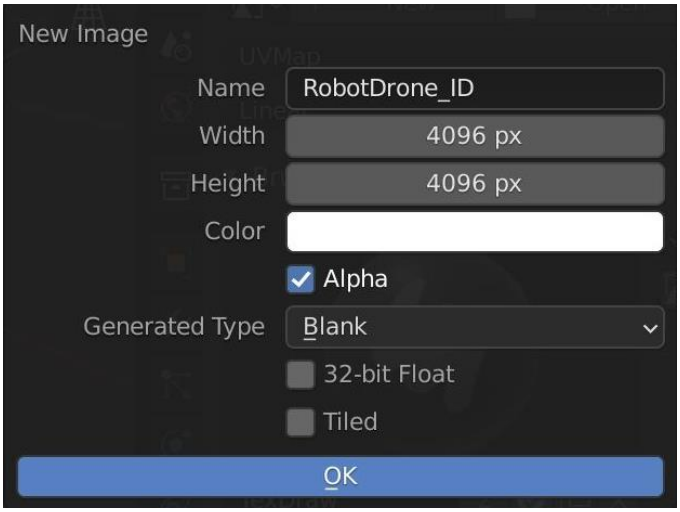


**Figure 1.3: New Image Settings**

7. The new white Texture will be assigned to your Model.
8. Go into Edit Mode with Face Selection enabled.
9. For the purpose of showing how to fill an area with color, select a single Face on the **Lens of the Robot-Drone**.
10. Now press *Ctrl + L* to **select the Linked Parts**. The selection will automatically terminate at the border of the **UV Seams**. See *Figure 1.4*

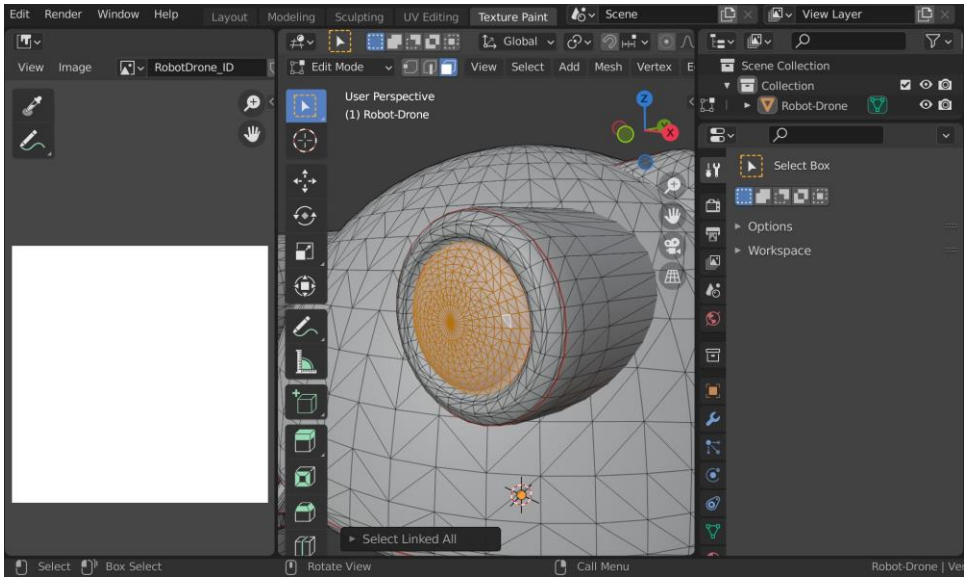


**Figure 1.4: Selecting a Face and selecting the Linked Parts to select up to Edges of the UV Seams.**

11. Select **Texture Paint** Mode in the drop-down Menu. See *Figure 1.5*

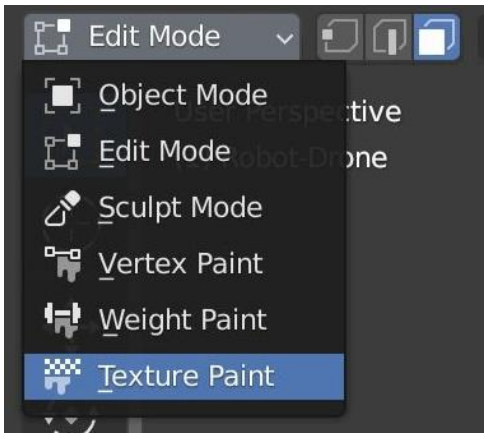


**Figure 1.5: Select Texture Paint Mode**

12. Select the **Fill** Tool in the Toolbar. See *Figure 1.6*

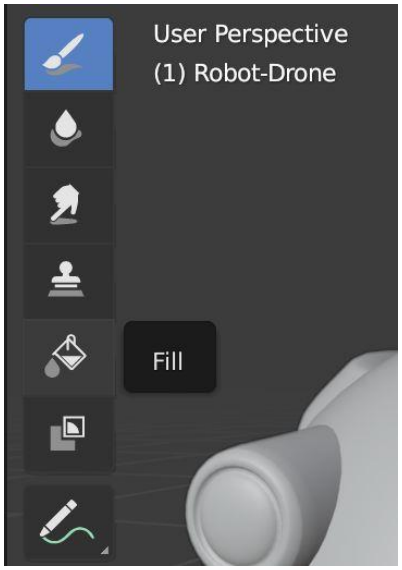


**Figure 1.6: Select the Fill Tool**

13. Change the color to Blue by clicking on the white slot (in the top of the Menu. See *Figure 1.7* ) and choosing the new color.

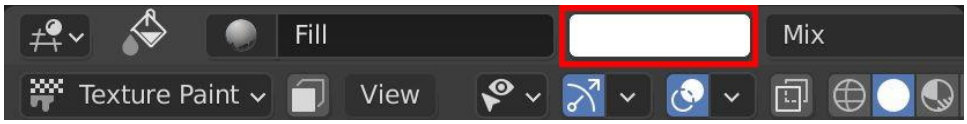


**Figure 1.7: Click on the White slot**

14. Choose a bright **Blue**. See *Figure 1.8*


**Figure 1.8: The color picker Window**

15. Click on the **Paint Mask** Icon. This will Mask the Fill Tool to only fill the color on the selected Faces. See *Figure 1.9*

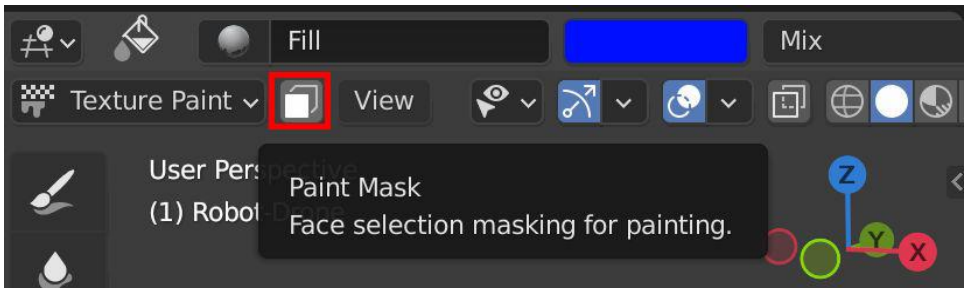


**Figure 1.9: The Paint Mask Icon**

16. Click on the Model to **Fill** the Blue color onto the (pre-selected) Lenses of the Robot-Drone. The Blue color will also be seen in the UV Editor area on the White Texture. See *Figure 1.10*

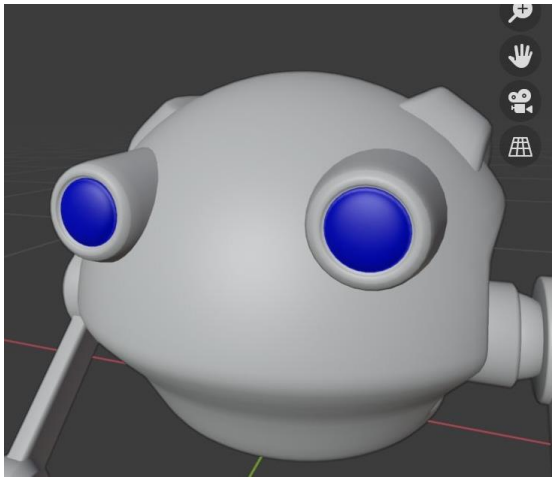

**Figure 1.10: The Lenses are now filled with Blue**

Continue this process for all the Parts of the Model. Select Faces, then use the Select Linked shortcut to select big areas (based on your UV Seams) and Fill them with various colors. You need to assign a single color per area of the Model that you intend to have a unique Material/Texture. See *Figure 1.11* to see my completed color areas.

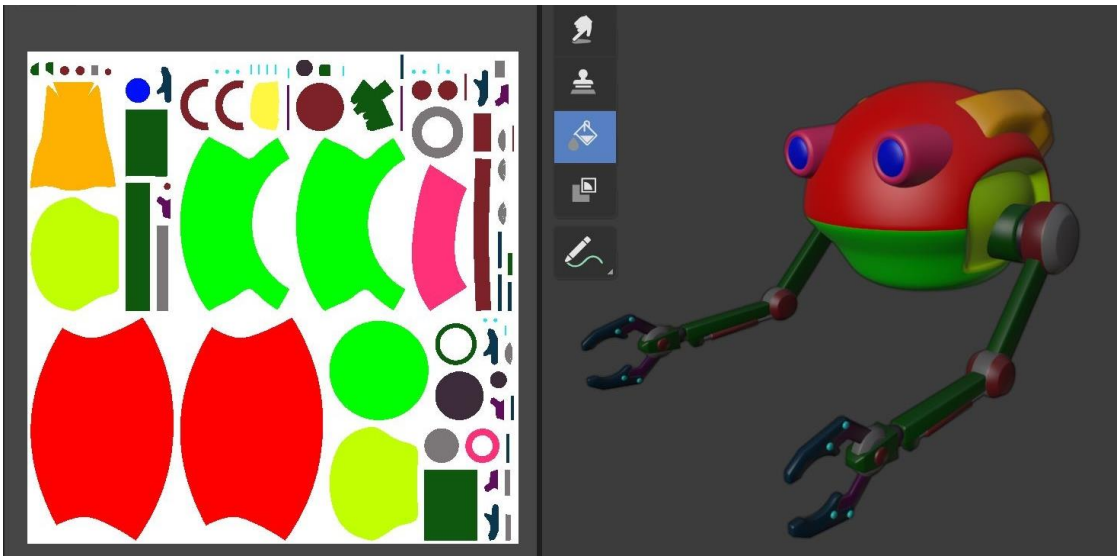

**Figure 1.11: The competed Material ID Map (The Model now has a color assigned to all Material areas.)**

Now that the Material ID Map is complete, You need to **Export your Texture** to your Hard-Drive. In the **UV Editor window under the Image > Save As.** See *Figure 1.12*

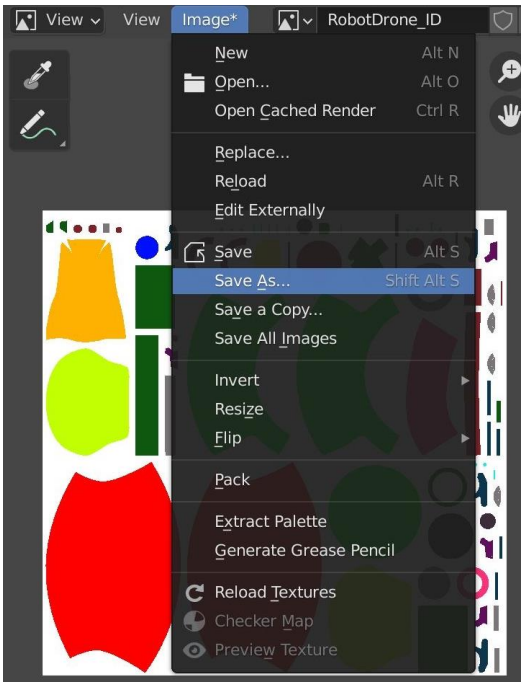


**Figure 1.12: Save your Texture as a `.png` file**

Here is how the completed Material ID Map looks for the Robot-Drone and the Alien Plant that I have prepared earlier. See *Figure 1.13*

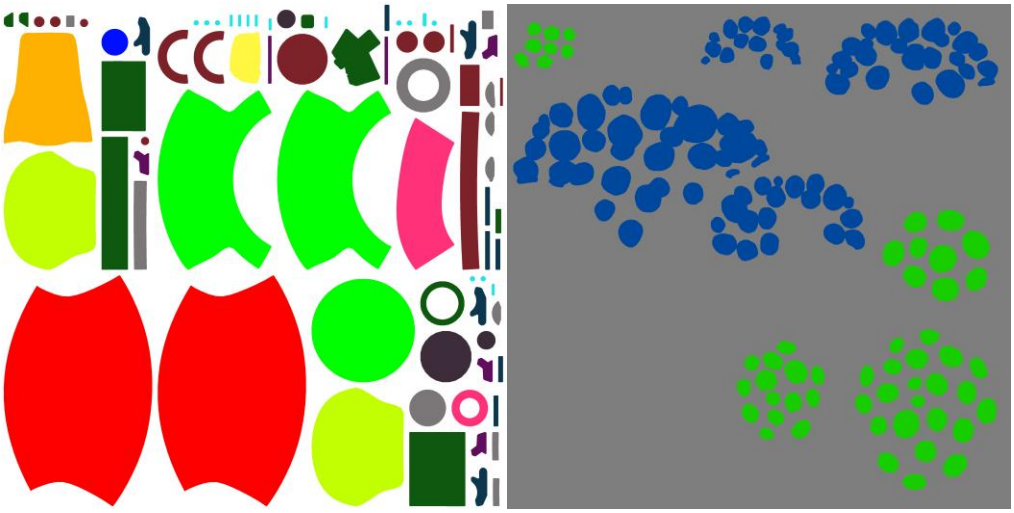

**Figure 1.13: The Robot-Drone (Left side) and Alien-Plant (Right side) Material ID Maps**

You  have completed the Material ID Map creation Online Tutorial !

# Summary

You now know how to create your own Material ID Maps. Use the same process for the Alien-Plant Model,  But since you don't have UV Seams around the  Nodules and Spore Sacks, you can use the Paint Brush Tool to paint the colors onto these parts.