

## Export MHD File from Slicer and Create Color Transform

Steps to export a 3D data object from Slicer as an .mhd file, then use the file to create a color transform .xml that can be used in Unity:

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**Scripts required:** <https://github.com/Know-Thymself-as-a-Virtual-Reality/MHD-ColorTransform>

**VIMEO link:** <https://vimeo.com/726185031> (Color transform instructions start at 00:02:43)

### Step by step (exporting from Slicer):

1. Start with a scene in Slicer, it should contain the object you want to work with.
2. Select the **volume rendering** module from the dropdown menu (fig. 1).
3. Select the model you want to export. Ensure it is the only model selected (the eye icon can be clicked to toggle model visibility).
4. Select **file** in the top dropdown menu, then click **save** (fig. 2).
5. When the save scene window opens, ensure only the model you want to export is selected (fig. 3). Change the file format to **.mhd** in its corresponding menu.
6. Click the box for **show options** (fig. 4) at the top right of the window and deselect **compress** for the file (compressed files won't import to Unity correctly).
7. Select a location to export the file to and click **save**.

### Step by step (creating color transform .xml – starts at 00:02:43 in video):

8. Close or minimize Slicer and move into Color Transform.

9. Click [load meta image](#) at the bottom of the screen (fig. 5). A window should open to allow you to locate and open the [.mhd](#) file you just created in Slicer.
10. Under the [lighting](#) tab, [shading](#) can be turned off (fig. 6) so the model's colors can be seen more easily.
11. Select the [opacity and color](#) tab, then click [transfer function editor](#) to open a window where the model's colors can be edited.
12. Click the circular nodes to select, then click the color button to change the color (fig. 7). More nodes can be added by double clicking on the line.
13. Click and drag the nodes to adjust [value](#) and [opacity](#) as desired. The window can be closed when the colors look as desired.
14. Also in the [opacity and color](#) tab, the [adjust transfer function](#) window can be opened and used to edit the color curve.
15. Navigate back to the [lighting](#) tab and test how the model looks with [shading](#) on.
16. When you're ready, click [save settings](#) (fig. 8), ensure [.xml](#) is the file format selected, then click [save](#).
17. You can now use the [load settings](#) menu to toggle between the available color transforms (fig. 9).



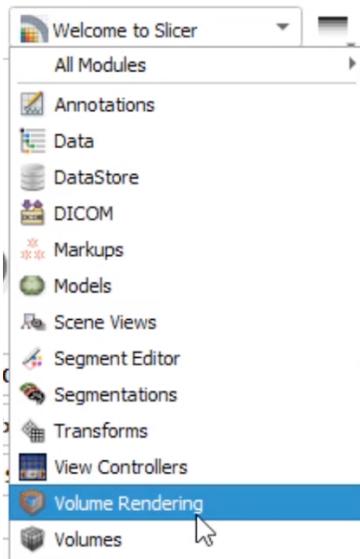


Fig. 1

Select the volume rendering module

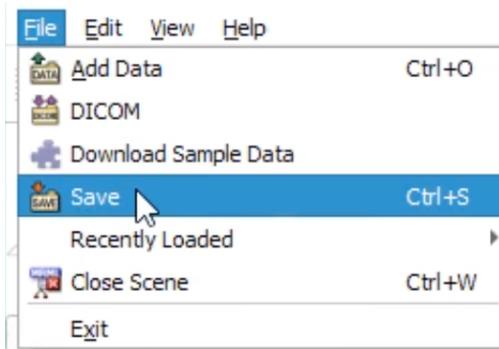


Fig. 2

File then save, or Ctrl+S (PC) to access save scene menu

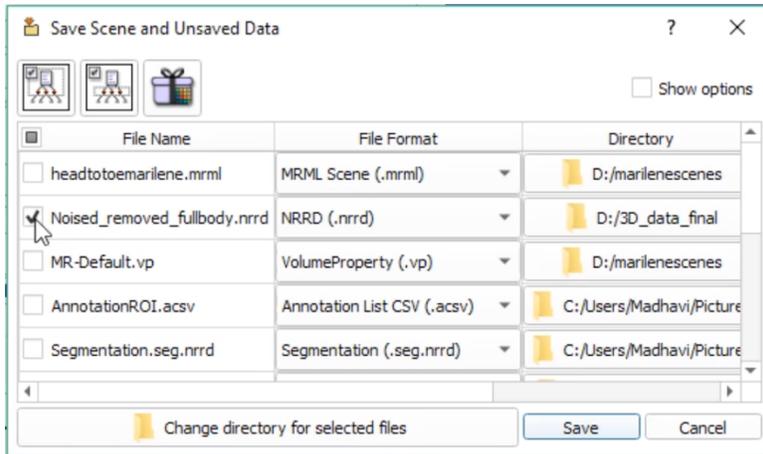


Fig. 3

Select only the model you want to export, check that no others are selected

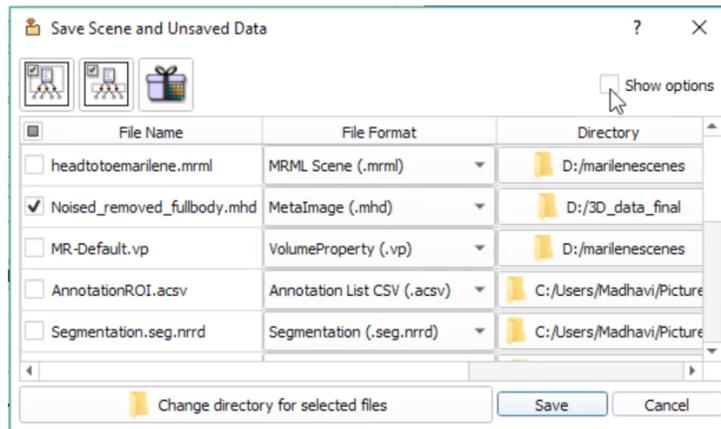


Fig. 4

Don't forget to deselect compression. Select show options to do so

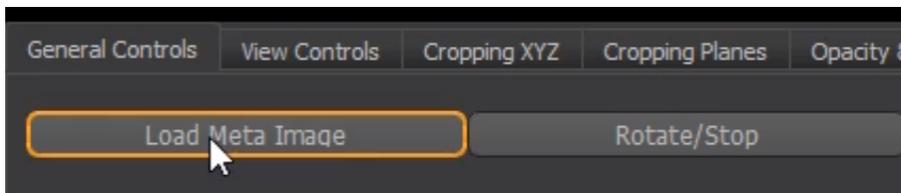


Fig. 5

The load meta image button is under the general controls tab





Fig. 6  
Toggle shading on and off



Fig. 7  
Changing the color of the selected node in the transfer function editor

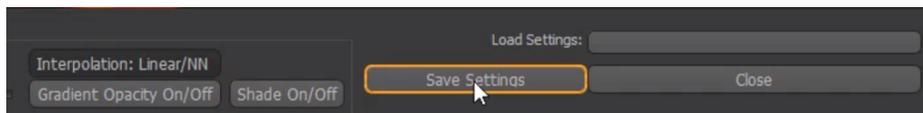


Fig. 8  
Save settings button to create the .xml

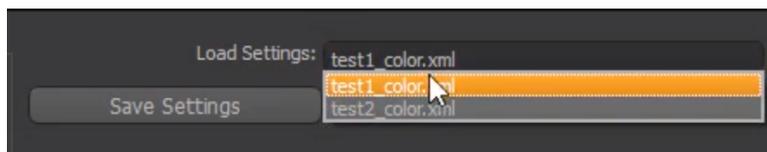


Fig. 9  
Available color transforms should appear in the load settings dropdown menu

**Note:**

- Colors applied to the model prior to exporting will not show up in the .mhd file.

