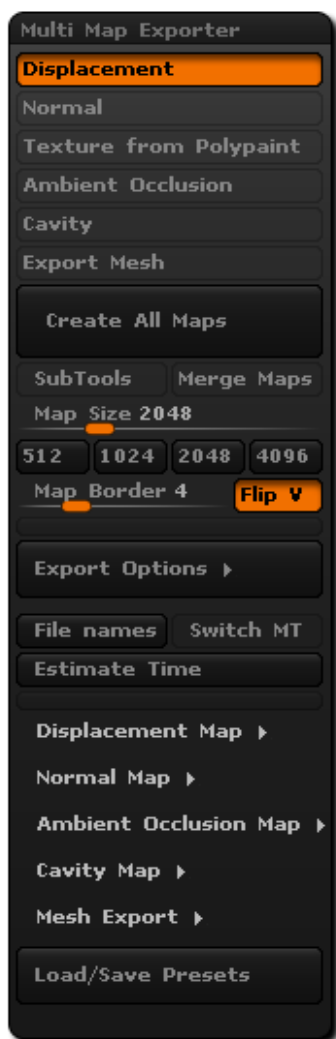


# I ABOUT MULTI MAP EXPORTER

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*Multi Map Exporter is designed to automate map creation and export for your model. Settings can be saved and reloaded so that you can quickly set up the plugin and then leave it to export the maps, freeing you to spend more time creating your art.*



## II INSTALLATION

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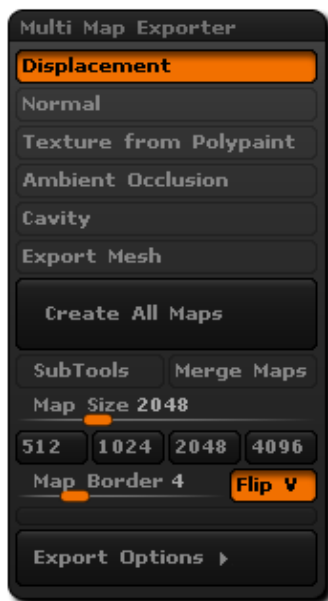
Multi Map Exporter is a plugin provided by default in ZBrush. If you need to reinstall the plugin, please, follow these steps:

1. Quit ZBrush
2. Extract the zip file to a temporary folder.
3. Copy the MultiMapExporter\_4.03.zsc to your ZPlugs folder. With a default installation this will be in C:\Program Files\Pixologic\ZBrush 4.0\ZStartup\ZPlugs or /Applications/ZBrush 4 OSX/ZStartup/ZPlugs
4. Also copy the MMEDData4 folder and its contents to the ZPlugs folder
5. Launch ZBrush.
6. Open the ZPlugin palette where you will find the Multi Map Exporter submenu, containing the plugin buttons and sliders.

## III INTERFACE

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Choose which maps you wish to create and export from top five switches. The sixth option is for exporting an OBJ file of your mesh.



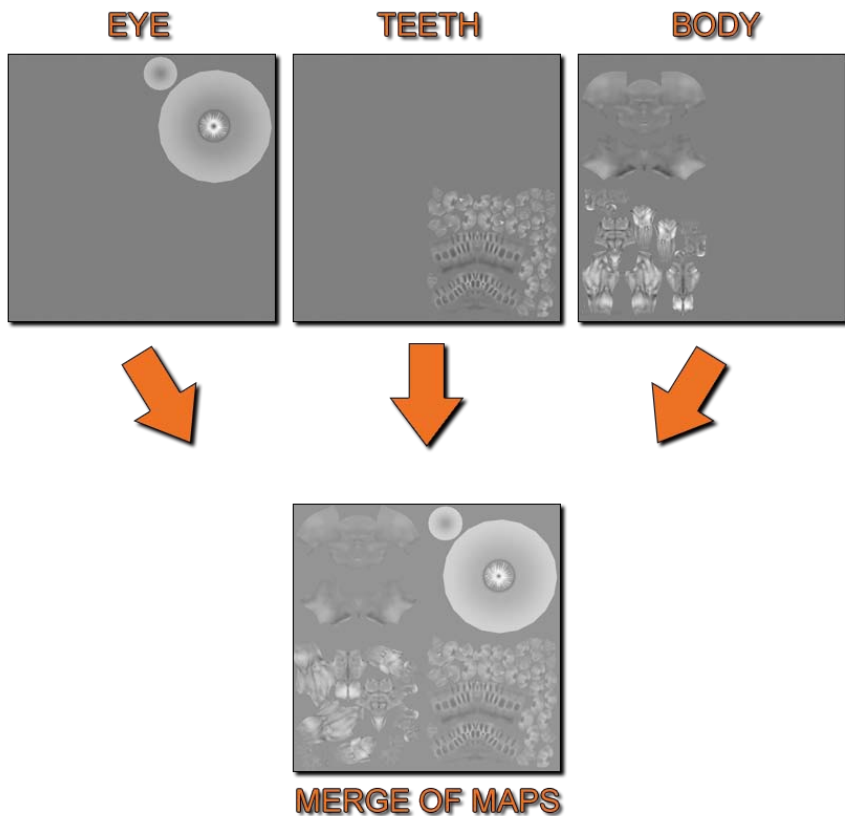
## 1. CREATE ALL MAPS

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Pressing the 'Create All Maps' button will show a 'Save file' dialog. Once you have chosen a location for the files the process will start. However, you will want to set various options first.

Beneath the 'Create All Maps' button are the main options:

- **SubTools:** When switched on, maps will be exported for the visible subtools. If you want maps exported for all subtools make sure that they are all visible. The selected subtool is always treated as visible, whatever the state of its 'eye' icon.
- **Merge Maps:** If this is on, the exported maps will be merged into a single map for all subtools where the UVs occupy the same UV space. If different map sizes are used then only maps of the same size will be merged. 'Merge Maps' has no effect if the 'SubTools' button is off.



Courtesy of ZBrush Artist Marco Menco

Note:

*As you can see from the above image the man has three separate subtools (Eye, Teeth, and Body) that share the same UV space. With Merge Maps on the Displacement Maps for the separate Subtools were merged into one map due to all three Subtools sharing the same UV space. This can be done for all maps.*

UVs should not extend right to the borders of a UV space but be scaled down a little inside. UVs that are on a border may be assigned to the wrong map or cause overlapping issues.

- **Map Size:** Sets the size of the map for all maps. Use the preset buttons underneath the slider to quickly set to the most common map sizes.

The Map Size slider can be disabled by setting to zero. With a zero setting the Tool>UV Map>Map Size slider setting will be used as the map size for each separate subtool. So if you wish to vary the map size on a per-subtool basis set to zero.

- **Map Border:** Sets the overpaint border in pixels.
- **Flip V:** Flips all maps vertically on export.

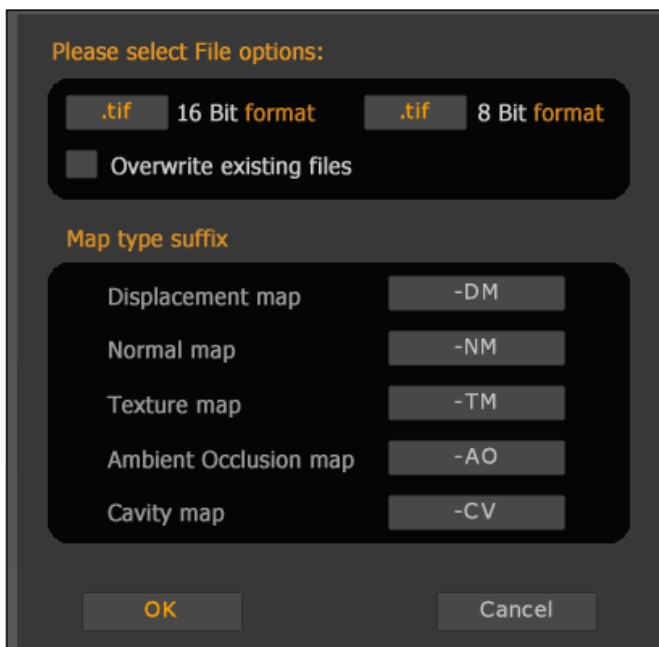
## 2. EXPORT OPTIONS

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Press the 'Export Options' button to reveal further export options:



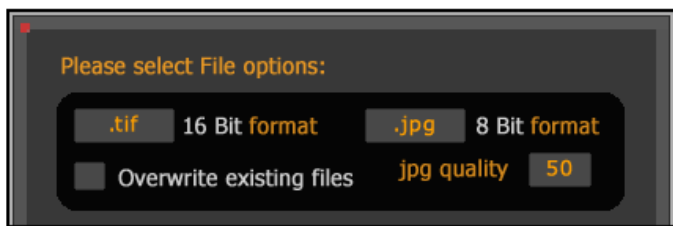
- **File names:** This button enables you to set what file types to use for the different maps, whether existing files are overwritten and what suffixes to use for the different map types.



Note:

*For easy identification of maps, file names automatically include UV tile identification using the form `_u0_v0`, `_u1_v0`, etc.*

- **File formats** are divided into two groups; for 16 bit files and for 8 bit files. 32 bit displacement maps are only exported as tif format.
  - **16 bit files:** These are grayscale and can be either tif or psd format. Displacement, Ambient Occlusion and Cavity maps can be exported as 16 bit files.
  - **8 bit files:** These are color and the available formats are tif, psd, bmp, tga and jpg. Normal, Texture from Polypaint, Ambient Occlusion and Cavity maps can be exported as 8 bit files.



If jpg is selected then a 'quality' setting will appear. For best quality select '100', for smallest file size select '10'.

- **Switch MT:** This button only applies if you are using an original base mesh from another application and wish to generate maps for that. It assumes that you have stored a morph target before re-importing the original mesh. Displacement/Normal maps will be generated and then the plugin will switch the morph target before moving to a higher subdivision level for generating texture, ambient occlusion or cavity maps.

Before starting the map export operation, each subtool must be at the subdivision level where the morph target is stored.

***A basic workflow would be:***

1. Go to subdivision level 1.
2. Store a Morph Target by pressing Tool >> Morph Target >> Store MT.
3. Import original mesh.
4. Set the plugin options, making sure the 'Switch MT' button is on.
5. Press 'Create All Maps' to start plugin operation.

The Switch MT option has no effect if no morph target has been stored.

- **Estimate Time:** This button will give an estimate of the time the plugin operation will take for the current settings.
- **Reset:** Use this button to set all settings to their defaults.

### 3. DISPLACEMENT MAP OPTIONS

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- **SubDiv level:** Sets the subdivision level from which displacement maps will be generated. If the slider value is greater than or equal to the highest subdivision level then level 1 will be used.
- **Adaptive:** Adaptive Raycast Scan Mode
- **DpSubPix:** Displacement Map SubPixel Accuracy. The Tool will be subdivided "x" number of times that the slider states in memory before map creation. For example if there is a Tool with 1 Million polygons and then slider is set to 1 then ZBrush will subdivide the mesh one more time in memory before Displacement Map is created. Which would make the Tool 4 Million polygons before the map was created. Note: Remember that this does not actually subdivide your Tool to 4 Million it is only done when the Map is generated.
- **SmoothUV:** UVs are smoothed before the map is generated
- **Mid:** The displacement mid value - for 16bit maps this normally set to 0.5; for 32 bit maps best results are with a setting of 0.
- **3Channels:** 3 identical channels are included in the file, for those renderers that require an RGB format.
- **32Bit:** Export a 32 bit Floating-Point map. When turned off the map will be 16 bit.

- **Scale:** This slider affects the scale of the map; higher values will exaggerate the displacement. For 32 bit maps the value should normally be 1 (pressing the 32Bit option button will reset Scale to 1).
- **Intensity:** The intensity or alpha depth factor that should be used when applying 16 bit maps. This value is set when the 'Get Scale' button is used. User input values will be added to the file names when the '16 Bit Scale' option is used but the value has no effect on displacement map creation.
- **16Bit Scale:** When switched on ZBrush will use the value set in the Scale slider when creating 16 bit displacement maps instead of optimizing each map on a per-subtool basis. This is useful when all maps need to be at the same intensity such as when the 'Merge Maps' option is selected.
- **Get Scale:** This button will estimate a suitable value for the Scale slider so as to give a 16 bit displacement map that is similar to an optimized version for the selected subtool. Different subtools can give widely varying results so it is important to assess which Scale value will produce the best results for your needs. In general the lower of a range of values should be used so as to avoid any clipping.

Note:

*If you are using creasing to control displacement or normal map generation then MME will respect the creases, however for meshes with several UV tiles any polygroups will be lost.*

## 4. NORMAL MAP OPTIONS

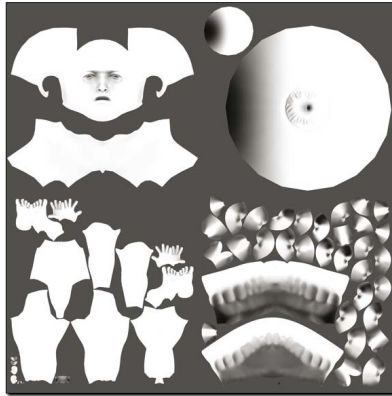
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- **SubDiv level:** Sets the subdivision level from which normal maps will be generated. If the slider value is greater than or equal to the highest subdivision level then level 1 will be used.
- **Tangent:** Create a normal map using Tangent(Local) Coordinates. Turn off for Global(World space) coordinates.
- **Adaptive:** Adaptive Raycast Scan Mode
- **SmoothUV:** UVs are smoothed before the map is generated.
- **SwitchRG:** Switch Red<->Green Channels.
- **SwitchRB:** Switch Red<->Blue Channels.
- **SwitchGB:** Switch Green<->Blue Channels.
- **FlipR:** Flip the Red channel.
- **FlipG:** Flip the Green channel.

- **FlipB:** Flip the Blue channel.

## 5. AMBIENT OCCLUSION MAP OPTIONS

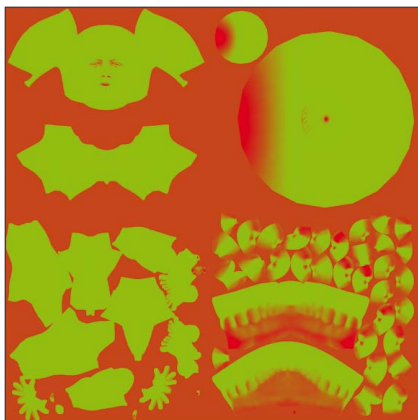
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Courtesy of ZBrush Artist Marco Menco

- **Occlusion Intensity:** This slider increases the Ambient Occlusion Intensity making the ambient occlusion areas larger and darker.
- **ScanDist:** Scan Distance increases the distance of the secondary color in the Ambient Occlusion.
- **Aperture:** Aperture affects the scale of the Ambient Occlusion, with smaller values giving a softer affect.
- **16Bit:** When on a 16 bit single channel grayscale file will be exported; when off the file will be 8 bit with 3 channels.
- **Colors:** When on, the Ambient Occlusion map will be generated using the main and secondary colors in the Color palette (only available as an 8 bit file). Turn off for black and white.

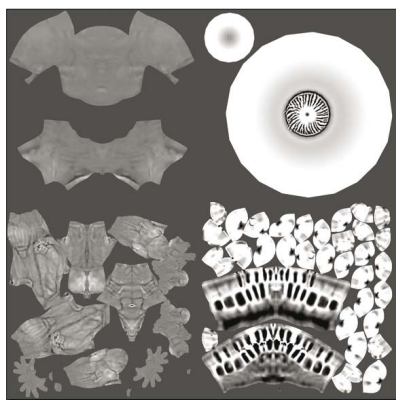




Courtesy of ZBrush Artist Marco Menco

## 6. CAVITY MAP OPTIONS

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Courtesy of ZBrush Artist Marco Menco

- **Cavity Blur:** Higher Cavity Blur values will soften the cavity map effect.
- **Cavity Int:** Higher Cavity Intensity values give a harder edge and greater contrast. Negative values will give an inverted map.
- **Use Curve All SubTools:** The Cavity Curve for the current subtool will be used on all visible subtools. Only applies if the 'SubTools' option is on.
- **16Bit:** When on a 16 bit single channel file will be exported; when off the file will be 8 bit with 3 channels.
- **Colors:** When on, the Cavity map will be generated using the main and secondary colors in the Color palette(only available as an 8 bit file). Turn off for black and white.



Courtesy of ZBrush Artist Marco Menco

## 6.1 EXPORT MESH OPTIONS

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- **SubDiv level:** Sets the subdivision level from which OBJ files will be exported. If the slider value is greater than the highest subdivision level then the highest level will be used.
- **Quad:** Polygons will be exported as quads (four-sided).
- **Tri:** Polygons will be exported as tris (three-sided).
- **Flp:** The polygon faces will be flipped on export.
- **Mrg:** UV coordinates will be merged on export.
- **Grp:** Polygroups will be exported.

## 6.2 LOAD/SAVE PRESETS

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To load or save settings, press the 'Load/Save Presets' button. All the plugin settings are saved, including the Cavity curve (if available). When loading presets a list of the last ten used files is loaded. Some sample presets are included.

# IV NOTES

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