3D Print ZBrush Models
Posted by Marco CM - 2013/03/14 14:42

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ZBrush is a powerful software modeling application, especially when paired with 3d printing. The possibilities are endless, figurines, jewelry, trophies, ornaments, and more can be sculpted digitally with ZBrush and exported for 3d printing. ZBrush comes equipped with a handy little zplugin called "3d Print Exporter" that will do the trick. Assuming you have basic understanding of ZBrush's layout, I will attempt to explain how to use the 3d Print Exporter zplugin and what is required of a model to be 3d print-able.
 http://kraftwurx.com/images/fbfiles/images/Color_hedron2_3dprint_web.jpg

 FYI: 3d prints are only as smooth as the actual polygon surface of the model. You will want to increase the subdivision of your model to   maximize the smoothness of organic shapes upon printing. Yet exporting a huge file size is not desirable for file management or suitable for many 3d printing technologies which have an upper limit of two million to nine million triangles per print. Fortunately Kraftwurx.com allows large file uploads of 200MB. With this in mind you may wish to run the Decimation Master zplugin on your model before exporting to 3d print.
 http://kraftwurx.com/images/fbfiles/images/Low_High_Mesh.jpg

1. Open the ztool (.ztl) file in ZBrush 4 or higher. Drag the ztool onto the document. Click "Edit". (Run "Decimation Master" zplugin if necessary.)

2. Check your ztool model for any geometric errors that may cause issues with 3d printers. Click the "Geometry" tab to open it. Click "Modify Topology" to open it. Now click "Weld Points" and "Close Holes". This is your first step to ensuring the model is "Watertight" which means it has volume or is "solid" and 3d print-able.

3. Further check the ztool. At the bottom of the "Geometry" tab, click "Mesh Integrity". Click "Check Mesh", and click "Fix Mesh" if necessary. Given you have no major errors to repair manually, your ztool should now be ready for export as a 3d printable model file.

4. Click the "Zplugin" button at the top of the ZBrush UI. Scroll down to and click "3D Print Exporter". First choose a scale for your 3d print. Calibrate the scale tool by clicking "Update Size Ratios". Now either keep the default scale or enter a specific size in inches or millimeters.
 http://kraftwurx.com/images/fbfiles/images/Edit.jpg
5. You may now simply select which 3d print file format you wish to export by click the either "STL", "VRML" or "OBJ".

6. You may export models for color 3d printing as long as they have been assigned UV coordinates and a color texture map. Choose "VRML" or "OBJ" in order to export models for full color 3d printing on machines like the Zcorp 650 Color 3D Printer. You may specify under the "Advanced Options" which file format you wish to have the texture map exported in.

7. Advanced uses include exporting subtools as separate model files, changing the model's orientation and model file language. See image below for brief explanation of these additional features.
 http://kraftwurx.com/images/fbfiles/images/3D_Print_Exporter_ZBrush_explination_web.jpg

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