PIPE EXTRUDER

WHAT IT DOES:

The Pipe Extruder is the core system in some of my assets like the ornament generator. Every product related to procedural mesh generation may contain this component.

This system creates pipes along points and can be used to create weave like structures like in the right image which is generated using the ornament generator.

The first setting is the UV Multiplier. This is a multiplier for the UV Coordinates of the final result. However the most important settings are those which describe the cross section.

The Cross Section Points slider sets the number of points used for the cross section. When you hit the reset cross section button, a regular shape is created.

The minimum number of points is 2 which will look like thin bands. The initial shape is a simple square. However you can edit the cross section by clicking on the edit cross section button. Afterwards small circles appear around the objects center which can be dragged around to edit the points.

When creating a pipe, the minimum amount of points required to create one is 4. This is the minimum amount of points required to calculate all positions and directions required to fully determine the appearance. However the first point and the last point lack information about the orientation. So under certain circumstances, the first and last mesh section can end up looking terrible. You can get rid of it when cull start/end is set, if not, the maximum connection threshold sets the maximum distance required to merge the ends together. The final result will also have collision when a mesh collider is attached. For optimization it is recommended to set the object static. **Note:** The generated mesh is limited to 65000 vertices.

You can export the mesh by clicking on one of those buttons. The standard path is the assets folder. However you can set your custom path and mesh name. You currently can export as .asset or .obj file.
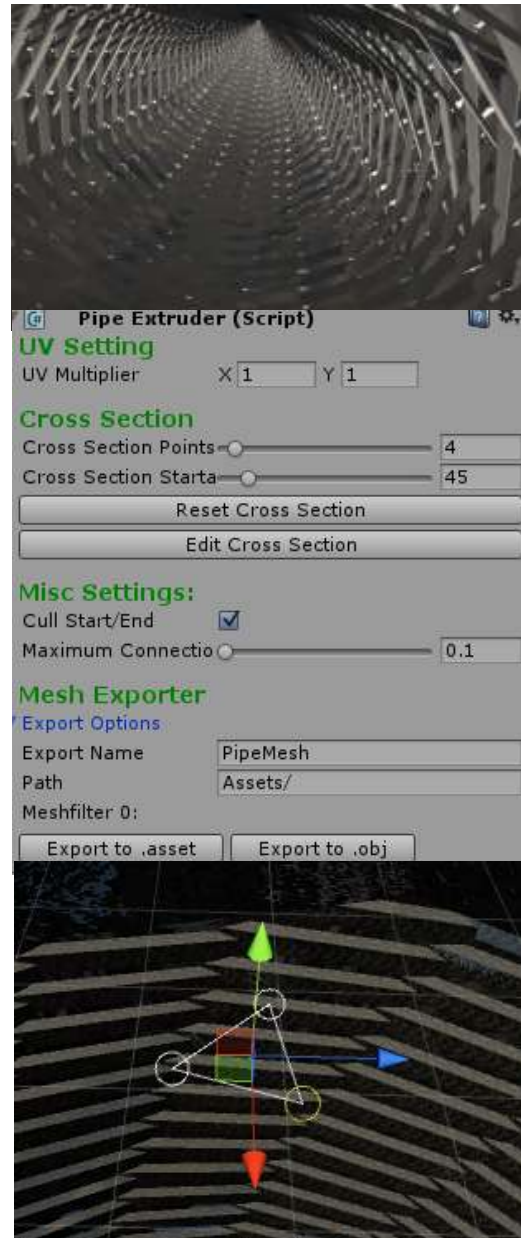
NATIVE PIPE EXTRUDER:

This core module also comes with a native version which utilizes burst compilation. This version uses the NativeMeshCombiner for the final mesh generation and does not generate the mesh by itself. The native version is highly recommended when meshes should be generated during runtime due to the superior performance compared to the normal pipe extruder. The settings of the native pipe extruder are similar to the normal one. The native version has no mesh exporting options because the NativeMeshCombiner already has them. Also the native pipe extruder has no vertex count limitation and the primary limit is the computation power of your device.
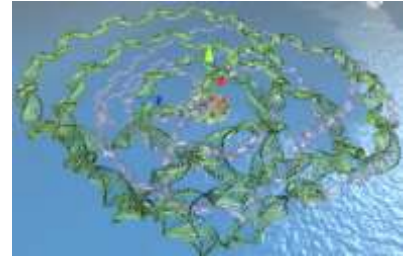
LAST NOTES:

If you have any questions about this system, suggestions, bug reporting don't hesitate to contact me

Contact Information:

E-Mail: mhartl.mmt-b2013@fh-salzburg.ac.at

Homepage: http://lostinpixels.org/