FESRetopo v. 0.7

Retopology tool based on Fabric Engine Splice

Overview

FESRetopo tool designed as alternative for such retopology tool as Topogun. This tool does not contain any automatic retopology functions (like ZRemesher in Zbrush), but contains some functions for convenient retopology process by hands. As based on Fabric Engine, it can be used in any DCC throw Splice, or even in Splice standalone application. In current release FESRetopo based on Fabric Engine 1.15.3.

Installation

1. The folder FESRetopo contains *.kl files with code for FESRetopo extension. So, you should copy this folder to standard folder with extensions

FE installation path\Exts\

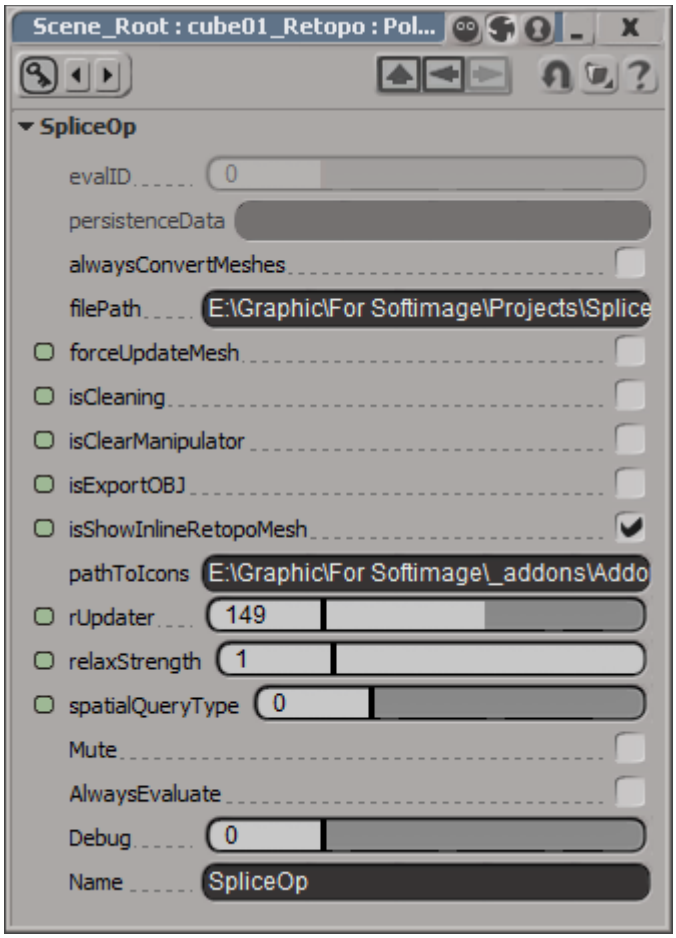
Alternatively you can store this folder anywhere (for example in D:\SomeFolder\) and add the path to the root folder (D:\SomeFolder\ in our case) to the environment variable

FABRIC_EXTS_PATH

Of course, if this variable does not exist, you should create it.

2. If you use Softimage you can also install the addon FESRetopo.xsiaddon as usual. This addon performs some work by setup splice operator automaticaly. Without this addon you should do throw the setup process manually.

Setup of the splice operator



FESRetopo splice operator contains only one input (and output in the same time) port: mesh0. So, you should create an empty polygon mesh add connect it to this port.

Parameters of the splice operator:

filePath – the path to hi-poly reference object in *.obj format. If this path is not specified, then the operator does not start.

forceUpdateMesh – when switched to on, the operator reload reference mesh.

isCleaning – when enabled, the reference object is hiden.

isCleanManipulator – when enabled, the interface of a non-active manipulator is not drawn in the viewport.

isExportOBJ – when enabled, the operator export current constructed low-poly mesh to the same directory where hi-poly file is. The name of this file is ReferenceFileName_Retopology.obj.

isShowInlineRetopoMesh – when enabled, the low-poly mesh is drawn in the viewport by Fabric Engine methods. In this case the real polygon mesh should be hidden in viewport to avoid overlaps of faces.

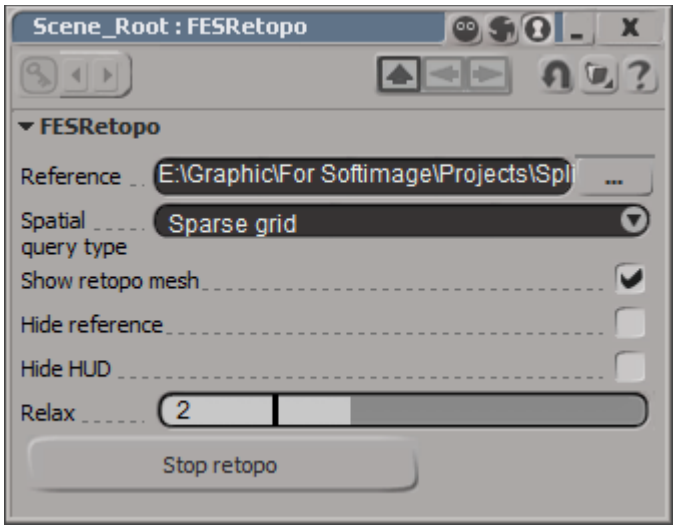
pathToIcons – path to icons for interface. This path should be specified earlier than filePath string.

rUpdater – technical parameter. It used for update splice operator when we change geometry of the drawn mesh.

relaxStrength – the strength of the relax brush.

spatialQueryType – the type of spatial query algorithm. 0 – SparseGrid, 1 – Octree. The first one is slightly faster in initialization process.

Softimage FESRetopo addon



The menu item appears in *Create – Poly. Mesh – FESRetopo*.

Parameters:

Reference – the path to h-poly reference object.

Spatial query type – the type of spatial query algorithm.

Show retopo mesh – when enabled, the retopo mesh is drawn by Fabric engine methods.

Hide reference – when enabled, the hi-poly mesh reference is not shown in the viewport.

Hide HUD – when enabled, the interface is not shown in the viewport.

Relax – the strength of the relax brush.

Start/Stop retopo button – by clicking Start you starts the retopology process. Addon executes the following steps:

1. If there is no selection, create empty polygon mesh and select it;
2. Isolate selection;
3. Set this mesh non-selectable;
4. Save it material;
5. Assign new material and set it completely transparent;
6. Save properties of the viewport;
7. Setup the viewport as *Shaded* without *Wireframe On Shaded*;
8. Load splice operator and setup it parameters.

By clicking Stop retopo, you stop the retopology process. Addon executes the following steps:

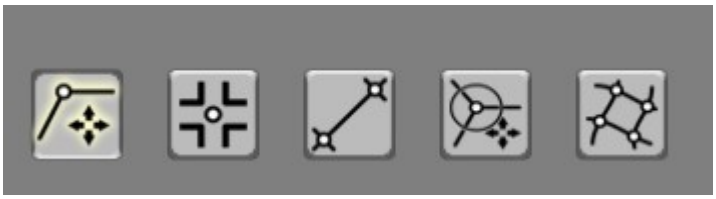
1. Set the viewport properties from saved data;
2. Turn off isolation;
3. Set the mesh selectable;
4. Freeze the mesh;
5. Delete it transparent material and assign the stored one.

Retopology tools

There are five tools

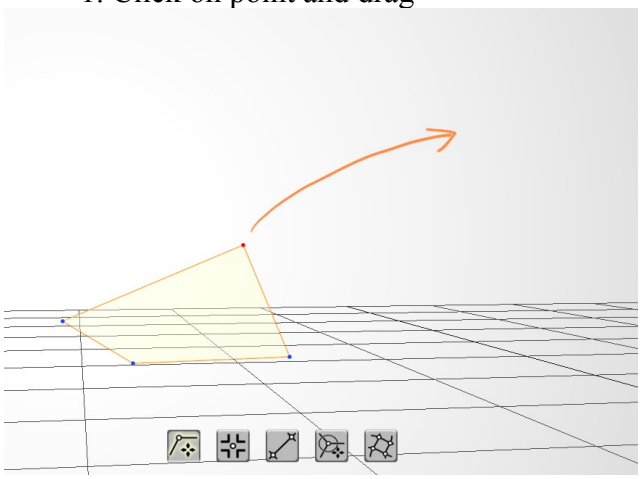
1 – Move points tool
2 – Create points tool
3 – Create edges tool
4 – Move brush tool
5 – Relax tool

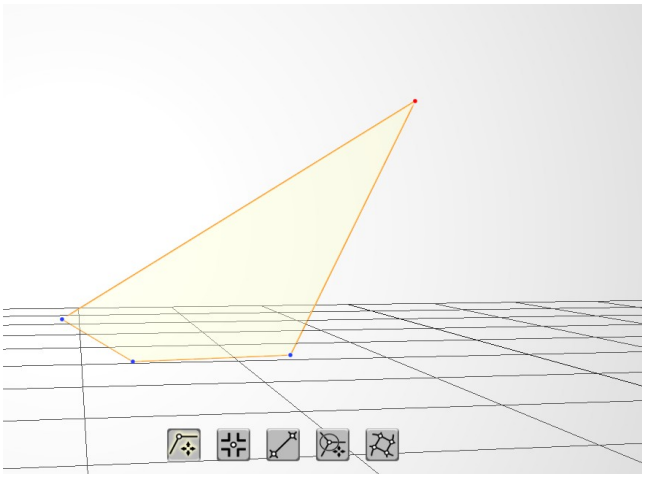
Move points tool



How to use:

1. Click on point and drag

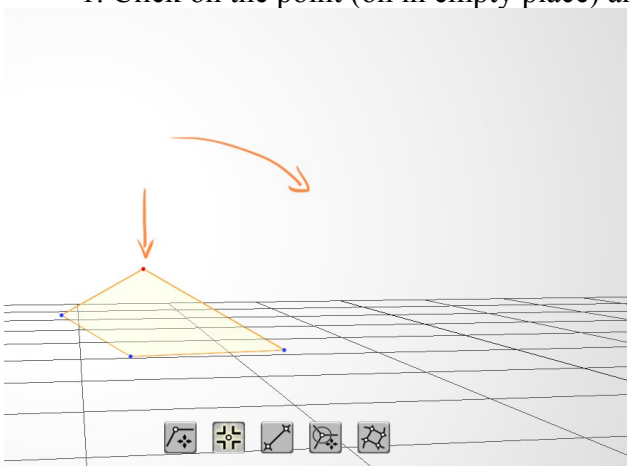


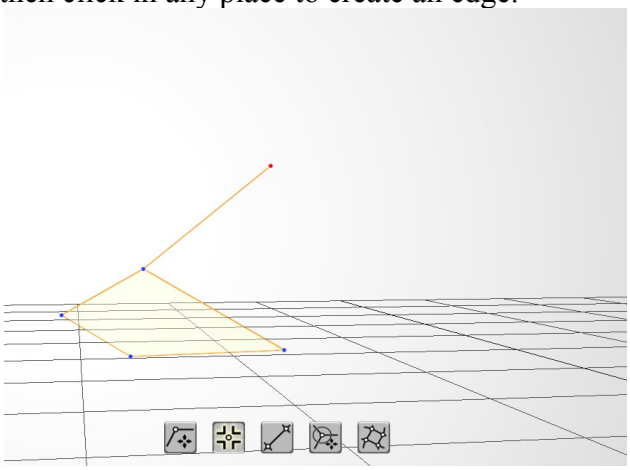


Create points tool

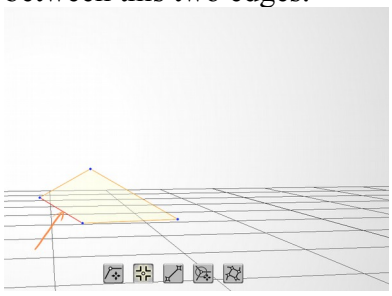
How to use:

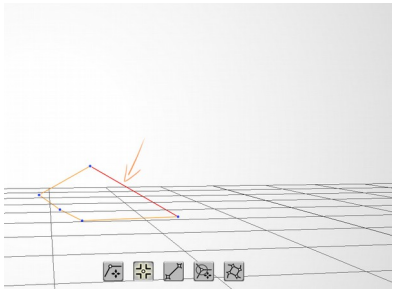
1. Click on the point (on in empty place) and then click in any place to create an edge.

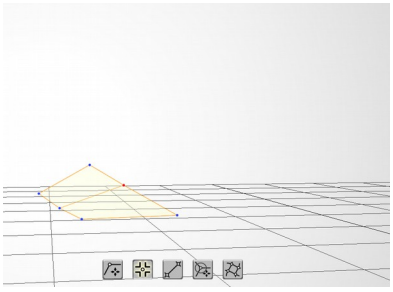




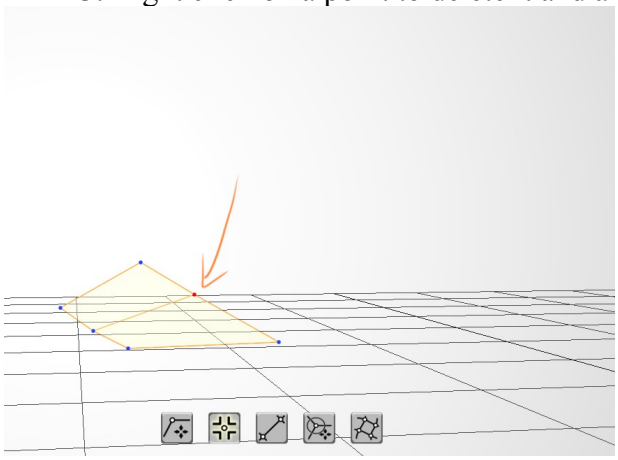
2. Click on the edge to split it. Click on the other edge to split it too and create an edge between this two edges.

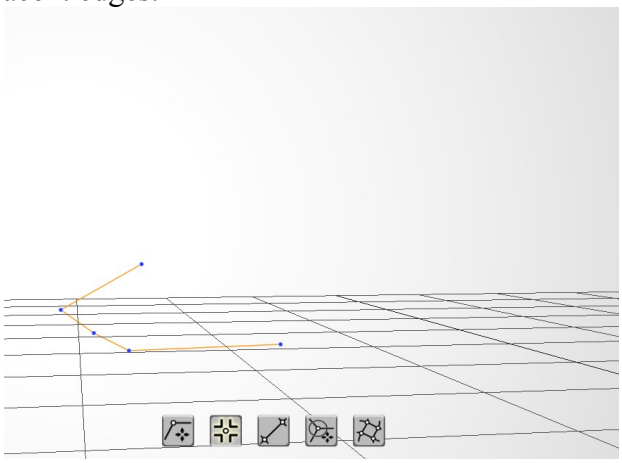






3. Right click on a point to delete it and all adjacent edges.

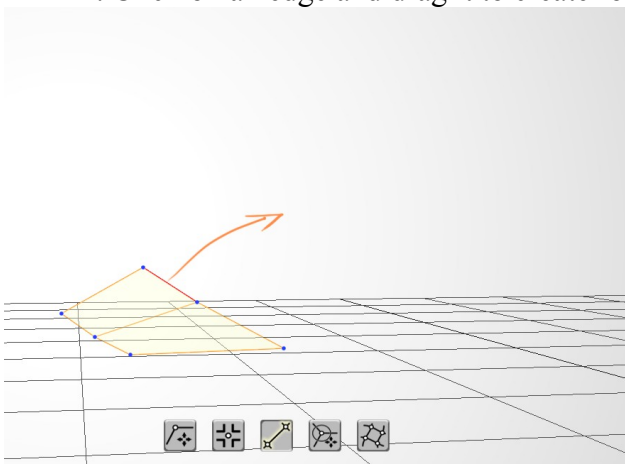


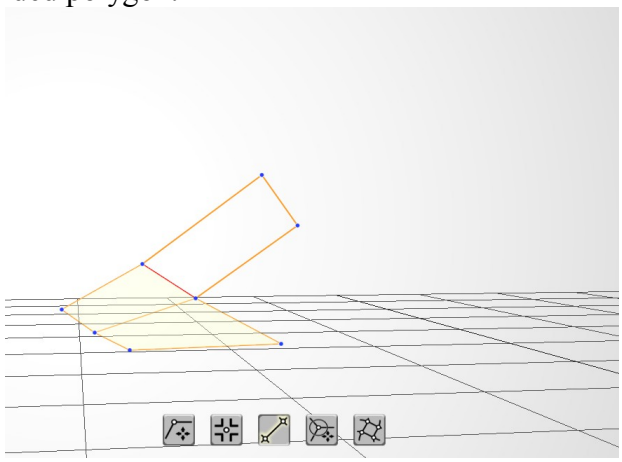


Create edges tool

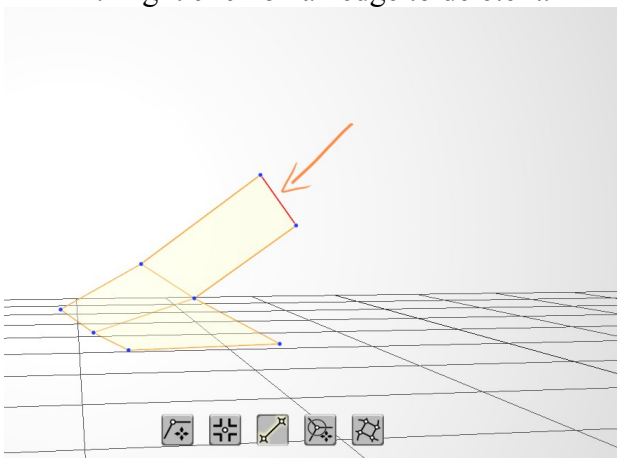
How to use:

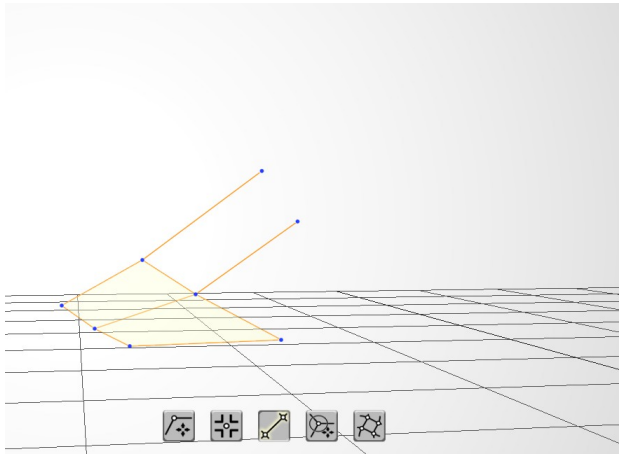
1. Click on an edge and drag it to create four-sided polygon.



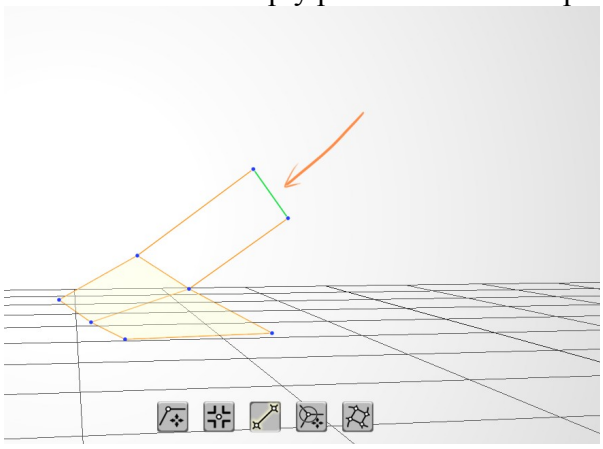


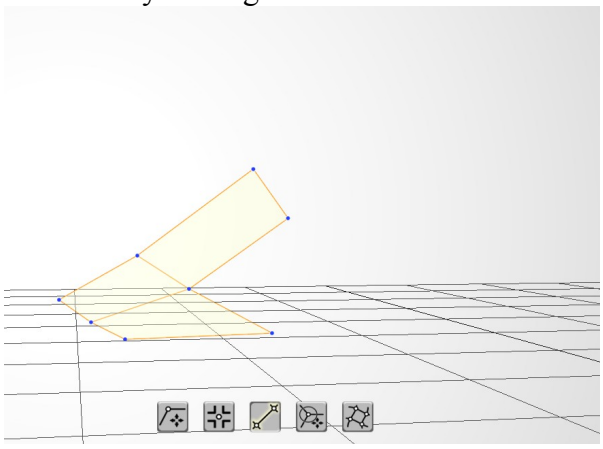
2. Right click on an edge to delete it.





3. Click on empty place between two points to connect it by the edge.

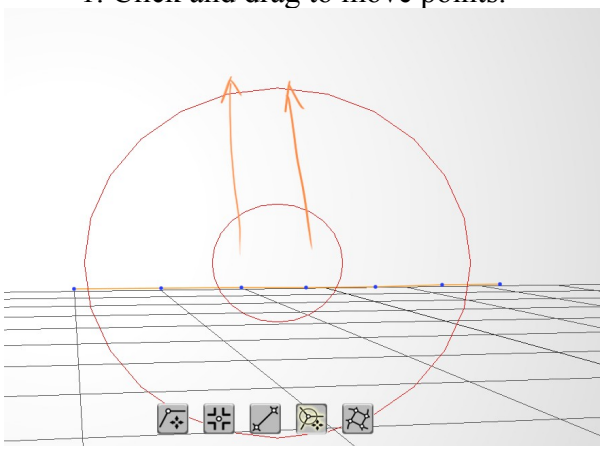


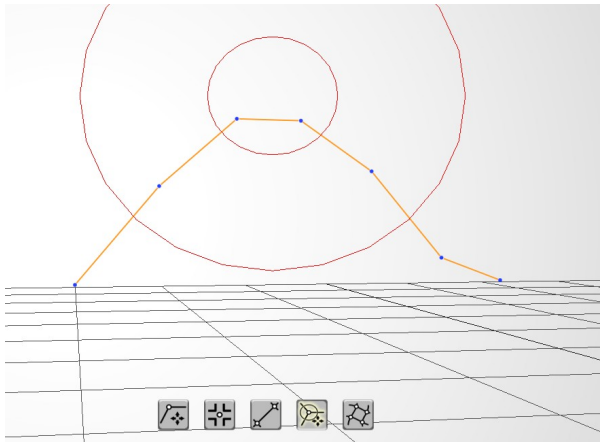


Move brush tool

How to use:

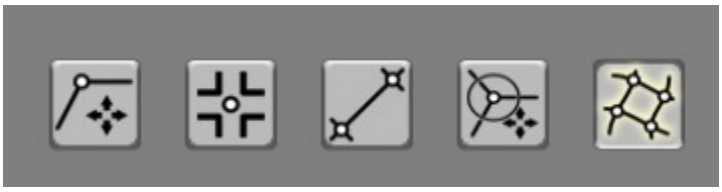
1. Click and drag to move points.





To change inner radius hold ctrl-key, click and drag up or down. To change brush size hold ctrl-key, click and drag left or right. The effect of the brush is 100% inside inner circle and fade to 0% near the outer circle.

Relax brush tool



How to use:
1. Click and drag to smooth point positions.