Week 8 Report (7/29/16)

Regular and Singular Elements Implementation

Attachment and Separation elements have been implemented with the formula you provided me. These implementations do not include a user input theta angle value in their calculations so they run on the theta value of 0 and point to the right. I will implement the new calculations that allow these elements to rotate according to user input.

I will revisit my implementation for singular elements. The focus will be how I’m manipulating the transformation matrix which then allows me to see the changes on rotation and scaling of the singularities. I will also look into the original code and see how you calculated and managed scaling and rotation. Most of the work will deal with user interface or at least the difficult parts I believe. To narrow down and focus on singularity editing, I will create an interface that edit the transformation matrix manually.

Flow Texturing

I have reviewed the OpenGL texture examples. Texture coordinates refer to the vertex which you desire to paste onto the image. Since our viewport is set to the origin, the texture will be shown on the xy axis. I will now work on the IBFV and continue debugging the code to get a demo running. To get a running example quicker, I will try to run the C code with glut plugins. With a working example, I can develop a concept for how the flow works and how it will mix with the vector field. The difficulty with debugging the IBFV code is that textures are saved onto opengl’s display lists which is on the graphics card. I will be debugging the IBFV sample by narrowing down the display functions and noting what is visualized. The goal is to get the 1st frame of the texture to show so that we can know placing a texture may not be the problem.

Conclusion

Most of the work for the coming week is finishing up the work for implementing regular elements and narrowing down the image based flow texture example to something we can translate our vector field to. I will get back as soon with what you wanted for the textures and hopefully and working example. I believe I will run into problems implementing boxes for the singular elements but I will get back to you with specific questions.

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