

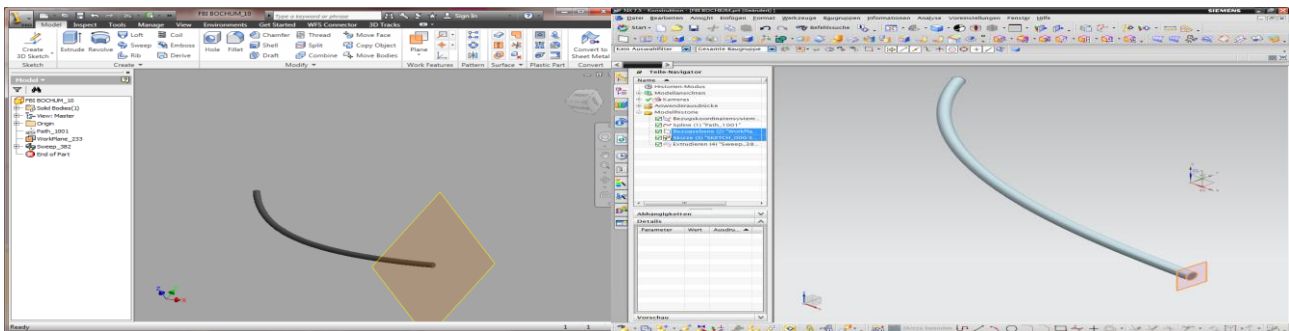
Software Lab:

Modeling: ★★☆☆☆
Mathematics: ★★☆☆☆
Programming: ★★★★★

A procedural geometry visualisation client

Setting

In spring 2011, the German Research Foundation (DFG) founded the research project “3D Tracks”. One of the main goals of the project is to develop a collaboration platform for the planning of inner-city carriageways. Thereby, the collaboration platform should enable different planners to work synchronously on the same geometric model. Therefore, we already developed a so-called procedural model: A procedural model saves the several construction steps in contrary to an explicit geometry model, where the concrete geometry such as vertices, edges, etc. is stored. To visualise and modify this geometric model, we provide a library that users can integrate into commercial CAD software products such as Siemens NX and Autodesk Inventor.



Task

Additionally, we want to provide our own visualisation client that – on the one hand – converts the procedural geometric model into an explicit one and – on the other hand – does the concrete visualisation.

In detail, you have to design and implement a visualisation tool based on the TUM.GEOFRAME framework, which means to:

- get familiar with our procedural geometric model,
- convert the procedural model to an explicit one,
- visualise the explicit model using TUM GeoFrame.

Supervisors

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References

- [1] Kollaborative Zusammenarbeit in Multi-Skalen-Geometriemodellen: Ein erster Entwurf eines Kollaborationsservers, M. Flurl, 2012