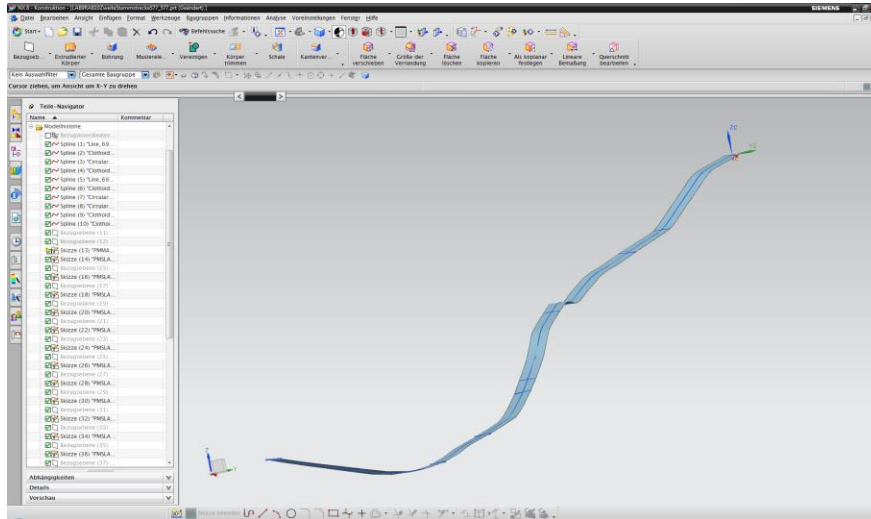


# Track Alignment and Energy Consumption of a Train



## Project Characteristics

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

## Your Task

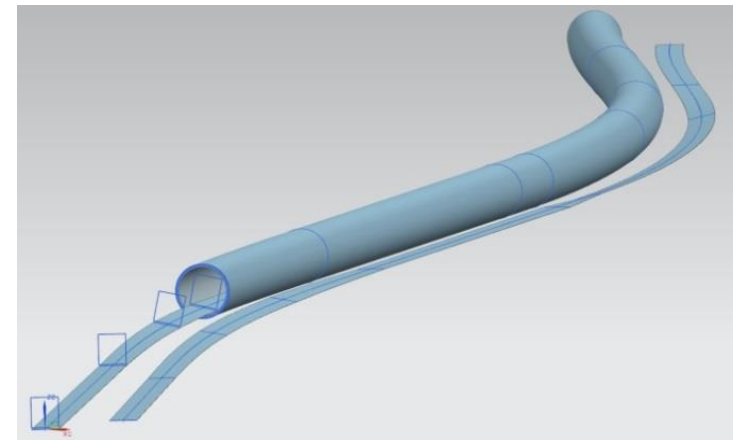
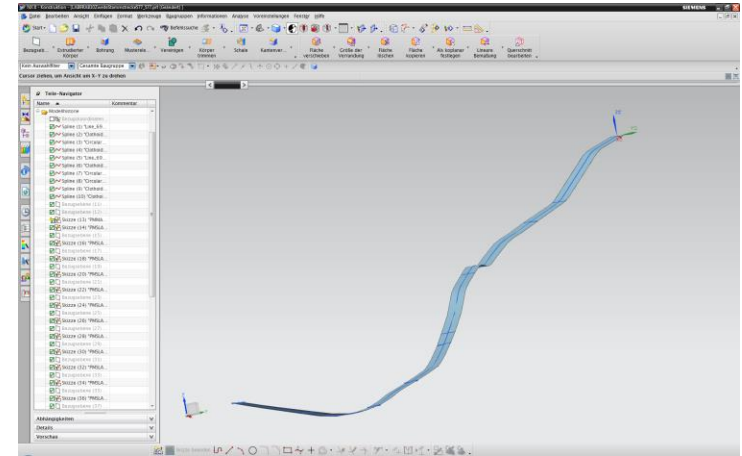
- Gain basic understanding of alignment modeling.
- Develop an algorithm for the calculation of the energy consumption of a train.
- Build a (recommended C# based) software module, which implements this algorithm.
- Integrate this software module into a given collaboration platform.

Programming language: C#

# Track Alignment and Energy Consumption of a Train

Subway tunnel planning and energy consumption

- Basis for planning a subway tunnel is the so-called alignment (track course)
- Alignment changes length of route, but also other parameters, e.g. admissible speed due to curvature.
- Objective of this Software Lab project is the simulation respectively calculation of the changes of a train's energy consumption due to modifications of the alignment.
- An algorithm for the calculation of a train's energy consumption has to be developed.
- Developed software module should be integrated into the collaboration platform .



# Track Alignment and Energy Consumption of a Train

## Challenges within this project

- CAD-Modeling and simulation
- Practical application in infrastructure engineering
- High-level object-oriented programming (C#)
- Professional software development

## Contact

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