

# Bachelor Thesis

## Comparison of different transmission line models

### Motivation

For the modeling of electrical lines different models are common, which are used depending on the desired accuracy of the calculation, the voltage level and the line length. In this work, the line models, which are represented by different bipoles in chain form, are to be compared in Matlab and a tool is to be developed, which outputs the parameters of a suitable standard model when key data are entered.

### Research Topics

- How large are the errors with simplified modeling compared to the exact model is used?
- Which model is the most suitable for which application (e.g. low load, heavy load, short circuit calculation), depending on voltage level and line length?

### Procedure/Methodology/Task definition

- Compilation of standard line data of the different voltage levels
- Comparison of the differences of the various models (exact, PI element, T element, longitudinal impedance, chain connection of several PI/T elements) for different load cases

### Organisational Issues

**Beginn immediately**

### Contact Person/Supervisor

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