

„Analysis of railway line characteristics in the German railway network”

Railway lines can be characterized by key properties, including, for example, the number of tracks, its design velocity and the (average) length of its block sections as well as the different trains running on a line.

The aim of this thesis is to analyse railway lines across the German railway network according to identified key characteristics. First, the relevant key characteristics that describe railway lines are to be identified and explained by a literature review. Additionally, the effect that these line properties might have on the capacity and operational quality of the railway line should be examined. Next, up to 10 significant railway lines in Germany should be chosen. For these, the previously identified line characteristics should be determined. If a line is made up of inhomogeneous line segments, a distinction of these segments is to be carried out. Judging from the results, an estimation of the line capacities and operational difficulties on these lines should be made and compared to real operational data on these lines.

The thesis shall conclude with a summary of the collected findings and a recommendation on how to optimize line characteristics for operational quality.