# Masterarbeit zu vergeben

Data Modelling and Programming Implementation for Track Condition Sensor Data Storage in a Graph-Database

Datenmodellierung und programmiertechnische Umsetzung für Speicherung von Gleiszustandssensordaten in einer Graphendatenbank

With the recent increasing importance of digitalization, graph-databases and hybrid database models have become much more relevant and are currently being extensively employed in a wider field of applications. The use of these new digital technologies contributes to increase the efficiency of planning and execution of infrastructure construction and maintenance processes, while reducing the associated costs and times.

The objective of this Master's thesis is the design of data structures and concepts for the representation and storage in a graph-database of collected datasets (sensor data and geo-referenced information) for condition monitoring of the railway track. Additionally, the programming implementation of the developed data structures must be also carried out. The graph-database corresponds to a data model developed at IEV. The obtained results must be discussed in detail and carefully analyzed. The methodology and workflow must be represented in a structured way (for instance, by using the Enterprise Architect software)
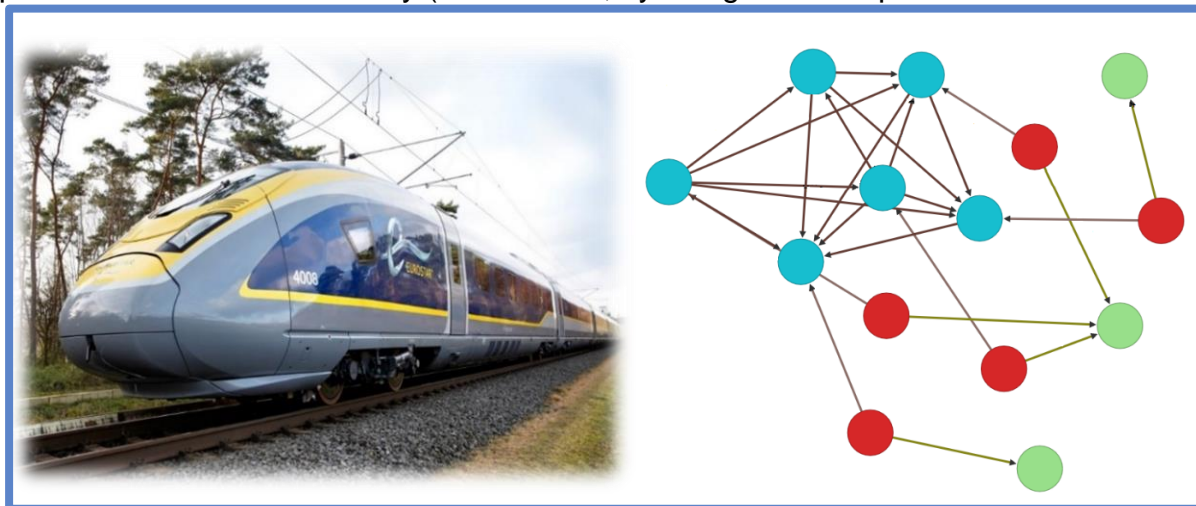
Knowledge of the programming language Java and database basics is required.

In case of interest, please contact:
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