INVESTIGATION OF ALTERNATIVE ROUTES FOR PASSING PASSENGER TRAINS AT THE KORNWESTHEIM STATION BY USING THE KORNWESTHEIM MARSHALLING YARD BYPASS (DB 4820)

Workspace of investigation: Stuttgart’s region.

Original track:
Between Zuffenhausen and Ludwigsburg station (over Kornwesheim Passengers station).

Infrastructure for deviations:
Kornwestheim Marshalling yard bypass.

Interacting trains at the net:
S-bahn, long distance and local regional trains, long distance and local freight trains.

Bypasses at west and east side of Kornwestheim Marshalling yard were used as deviations in both directions.

Using Railsys to modify the routes and infrastructure was possible obtain the information to be evaluated in PULEIV.

The Actual Situation represent the best operation and was used to compare the results of each new Variant.

5 Variants were created (3 without changes at infrastructure) as possible solutions to deviate the long distance passenger trains over the bypass.

Variant 1

Variant 2, 3, 4, 5

The analysis was performed on critic schedules of operation of the net.
One of the analyzed variants (Variant 3) has an increasing over the allow velocity to determine the influence of this parameter on the simulation.

The infrastructural changes over the Variant 4 and 5 were applied over critic points to avoid the conflicts between trains.

Comparison between the current situation and variants (morning).
The graphic shows Delay Coefficient vs. number of simulations.

Comparison between the Actual Situation and Variants (evening).
The graphic shows Delay Coefficient vs. number of simulations.

Diplomarbeit von cand. Ing. Hernando Felipe Picón-López
Betreut von Dr. Dipl.-Math. Fabian Hantsch — Dipl.-Ing. Sebastian Rapp
Praxispartner: Deutsche Bahn AG
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