

In2Rail: Integrated track geometry model

Background

Track geometry deteriorates with time and use. Its state is controlled by maintenance (tampings). Tamping breaks the ballast and changes the deterioration process (non linear behaviour).

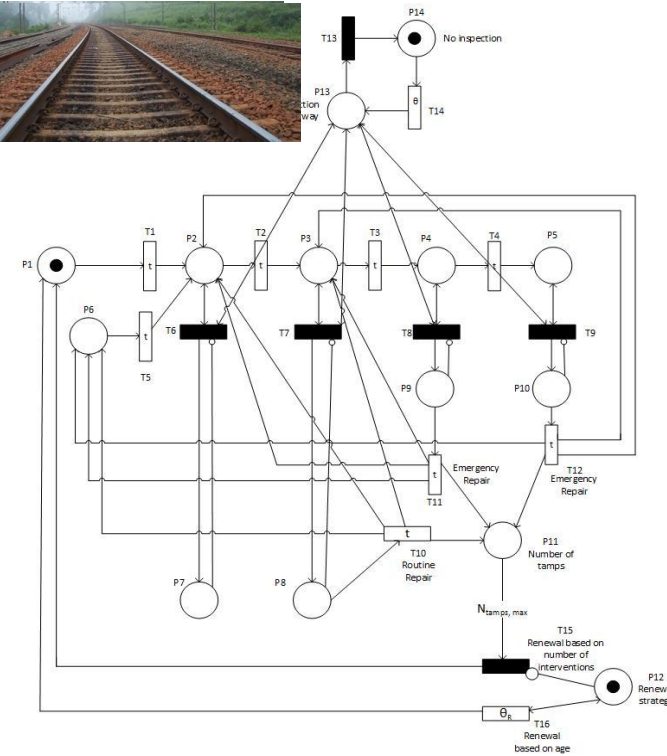


Objective

Produce a model combining degradation and maintenance processes to **evaluate the effects of a range of maintenance strategies** on track geometry condition, n^o of interventions, a measure of the impact on service and safety and the whole life costs.

Input :

- Line and track type (speed, EGT, service frequency, etc..)
- Historical data on track conditions and maintenance activities
- Intervention parameters (inspection frequency, thresholds triggering routine maintenance, time to schedule maintenance, etc..)



Output (distributions of) :

- no of interventions
- no of renewals
- no and duration of speed restrictions (both defined and undefined)
- no and duration of line closure (both defined and undefined)
- Probability of being in any of the degraded states

Analysis Results

