Maintenance-free operation in railway corridors

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Background

- A lot of money is spent to maintain the railway in a high standard. Small changes in different parts of the network can lead to significant savings.

Objectives

- Investigate the application of Maintenance-Free Operation Periods (MFOPs) on the railway system as a maintenance approach to check whether is a good option for saving money and resources.

Methodology

- A Petri Net is used to model the track geometry, rails, switches and crossings and signals, including degradation dependencies.
- Compare a regular maintenance approach with a MFOP one, having a fixed time in which the system is not maintained unless the system fails, followed by a Maintenance Recovery Period MRP to improve the system's condition.