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INNOTRACK

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Stiffness data processing and evaluation

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Dissemination Level		
PU	Public	PU
PP	Restricted to other programme participants (including the Commission Services)	
RE	Restricted to a group specified by the consortium (including the Commission Services)	
CO	Confidential, only for members of the consortium (including the Commission Services)	

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Glossary

Abbreviation/acronym	Description
RSMV	Rolling Stiffness Measurement Vehicle

1. Executive Summary

Measured condition data may contain lots of information which is not efficiently used. This deliverable outlines a methodology for eliciting new information by using techniques from the field of pattern recognition. The methodology is demonstrated on a large set of condition data originating from track geometry quality measurements and dynamic stiffness and from ground penetrating radar. The case study gives evidence for the importance of dynamic stiffness measurements as to determine soil and embankment related track problems, while problems originating from the upper part or the track structure do not benefit significantly.

2. Introduction

Task 2.1.9 in INNTRACK has been devoted to finding new innovative methods to extract information from different kinds of condition data. The research has been part of a PhD-thesis and has also been presented at the 2009 IHHA conference in Shanghai. This deliverable consists of an executive summary and the IHHA paper [2], which is appended. Further details may be obtained from the PhD-thesis [1] available from the Royal Institute of Technology in Stockholm.

3. Bibliography

[1] Berggren E. Railway Track Stiffness – Dynamic Measurements and Evaluation for Efficient Maintenance, PhDThesis, Royal Institute of Technology (KTH), Stockholm 2009.

[2] Berggren E: *Efficient Track Maintenance - Methodology for Combined Analysis of Condition Data*, Proceedings of the IHHA conference in Shanghai, China 2009.

4. Annex

Berggren E: *Efficient Track Maintenance - Methodology for Combined Analysis of Condition Data*, Proceedings of the IHHA in Shanghai, China 2009.