

Modi-Roma, a complete overview of an entire road network.

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ABSTRACT

The concept is to combine and process available data from fixed measuring field stations and floating cars. The combination of different sources of data gives a novel opportunity for efficient monitoring and detection of variations in pavement and road conditions. This approach enables development of maintenance tools for road conditions during various times of a year and various traffic conditions. Data from the CAN-BUS within the car are applicable as a quantitative basis for signal processing and analysis. The following road parameters can be estimated and further studied:

- Quality of the road condition
- Strength of road bed
- Need for winter maintenance

In order to demonstrate its applicability, a Graphical User Interface will be developed, and a pilot will be demonstrated in a test area in Sweden. The results will be evaluated carefully, and cost/benefit analysis made in order to assess the feasibility and benefits of these new methods in road maintenance.

Road condition and performance assessment technique which offers new effective tools for monitoring and assessing maintenance needs across Europe. The need for road maintenance, concerning winter roads, pavement condition or other road specific parameters is today decided based on either manually performed observations or collected data using sophisticated measurement devices. Specially designed vehicles are used for some surveillance and others are based on detailed measurements using specially designed instruments.

The available technique today may be sufficient but costly for collecting data needed for decision making of different kind. Moreover, data are collected only for predefined road network or section. MOBI-ROMA involves a new concept for efficient and cost effective data collection using mobile technique.

The objective of this research is to introduce a new tool for cost effective road management. The approach is to combine and process available data from fixed measuring field stations and floating cars. The combination of different sources of data gives a novel opportunity for efficient monitoring and detection of variations in surface condition both before and after different maintenance works. This approach enables development of maintenance tools for road conditions during various times of a year and various traffic conditions.