



Decision Support System for Winter Maintenance of the Motorways (DARS MDSS)

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Weather has a significant impact on road safety, as evidenced by the many events of the past winters in Slovenia. Weather information systems provide important support to drivers and road maintenance services, increase road safety and reduce the cost of winter maintenance.

In winter 2015/2016, the Slovenian Motorway Company's Road Weather Information System (RWIS DARS) was upgraded with additional relevant functionalities that promoted the existing RWIS into the Maintenance Decision Support System (MDSS). MDSS is a tool that utilizes weather forecasts and observations to assist managers in making appropriate decisions to best utilize resources when planning for and treating snow and ice.

A thermal mapping of the road network was conducted on Slovenian motorways. The thermal mapping data were primarily used in calculating the high-resolution route-based forecasts of road temperature and road conditions throughout the motorway network. On the basis of these forecasts, the system proposes treatments for the implementation of winter service (i.e. ploughing/gritting, gritting materials, time and location) and anticipates their impacts according to the forecasted road temperature and road conditions.

DARS MDSS, which will be presented in the paper proposed, is developed on the latest technologies and it incorporates the knowledge and experience of the profession and users.