



Development project ColdSpots: Accurate road condition forecasts for road stretches

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The objective of the three-year project, ColdSpots, is to improve the present weather and road condition forecast methods and models by establishing and utilizing a novelty database which covers detailed local information on problematic road sections in Finland. A wealth of information has long been available in various databases, such as registers of road structures and traffic accidents, feedback on road maintenance activities and quality control data. However, this information has been unavailable to the developers of weather forecast models, until now.

ColdSpots was initiated in 2005 with first analyzing the available information and compiling the necessary databases. A test set of some fifty most problematic locations were selected based on accidents having occurred due to slipperiness of the road surface and, additionally, based on the human knowledge of individual road features by local road maintenance experts. During the second phase, 2006-07, this ColdSpots location data was implemented in the road condition models and pilot studies were performed. Verification of their outcome is underway. New mobile instrumentation utilizing optical spectroscopic sensors measuring the state of the road surface state, friction, temperature and moisture are used in the verification and model development. Also, the variation of surface temperature and friction along the road stretches has been studied as well as the reason for these variations. (Presented in more detail under EMS/FW4 – Verification)

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