Latvia Expands Its Road Weather Information System

After deciding to invest in road traffic safety, the Latvian Road Administration began upgrading its road weather monitoring system in 1996. Vaisala installed the first six road weather stations, and this contract soon led to two others. By early 1999, Latvian roads will be monitored by a total of thirty weather stations.

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From one contract to three

After an international tender, Vaisala won the contract to deliver and install an RWIS in Latvia in 1996. The Latvian Road Administration signed an agreement for the installation of six weather stations and the delivery of data processing software and personnel training.

The six installed weather stations have performed well. With just a few exceptions, information on road weather conditions has been received on a regular basis. Based on Vaisala’s high-quality guarantee and post-guarantee service and their assistance with maintenance and repairs, two additional contracts for the delivery...
and installation of road weather stations were signed in the summer of 1997.

The first contract covers the installation of eight more stations, and the second, the installation of an additional sixteen stations during 1998. Once these stations are installed, Latvia will have thirty road weather stations on its main roads, plus one central computer and five workstations. Data from the weather stations is transmitted to the central unit via GSM phones.

**Focus on greater efficiency**

The road weather information system opens up a wide scope of possibilities. The lack of practical experience in the field, however, has limited the effectiveness of the system. The Latvian Road Administration has signed agreements with regional stock companies, which are responsible for road winter maintenance. This will enable more efficient snow removal and salt spreading on the roads.

**Ice and Fog Warning Systems in Australia**

At the trial site, the Great Western Highway is a sweeping bend cut into the side of Mt. Lambie, which tends to shade the road for most of the day. The ice warning system includes road surface temperature, humidity and rainfall sensors that closely monitor the road surface conditions. When weather conditions deteriorate and ice is likely to form on the road surface, the system activates a local warning sign. A VLF radio link is then used to activate warning signs that notify oncoming traffic on both sides of the mountain of the potentially dangerous conditions ahead. Once conditions improve, the warning signs are automatically deactivated. The system automatically records all measured data for later analysis. A local display in the roadside cabinet alerts maintenance crews to faults in the warning signs. The system is dynamic, providing motorists with current information. It is considered more effective than static road signs.

A warning system has also been installed to notify motorists when fog has been detected at driver eye level. The system is sited at Cox’s River, which forms a deep river valley. A creek at the bottom of the valley passes under a concrete road bridge and flows into a holding basin for a coal-fired power station. When the fog warning measures visibility lower than a user preset visibility value, remote warning signs connected via a VLF radio link are automatically activated, alerting motorists to the deterioration in driving conditions. Simultaneously, the system activates a set of amber overhead street lights to increase the drivers’ visual range. Once conditions improve, the warning signs and overhead lights are automatically deactivated. The system automatically records all measured data.

The RTA will monitor driver reaction to the systems as part of a continuing system evaluation process. It will also investigate ways of minimizing road closures caused by ice and snow. Part of the investigation process requires the RTA to develop a communication plan for quickly advising the community via the media of changing road conditions.

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