

## SmartFleet LivingLab

As the volume of traffic is increasing steadily, road operators have to face ever new challenges, due to the fact that there is neither more space nor budgets for traffic infrastructure measures. Within the framework of the project “SmartFleet LivingLab” a fleet of intelligently networked vehicles should be established, which should deliver vehicle real-time data in order to give information concerning the current traffic situation. On this basis, in a further step, newly information systems should provide the possibility for fleet operators to benefit from less traffic congestion.

The rising demand of the population’s mobility needs, the ongoing integration process within the European Union, as well as the advanced globalization trend of production processes and trade relations lead to a continuous increase in the traffic volume. Forecasts predict a rise in the freight traffic volume of 50 percent and in the individual traffic volume of 30 percent in Upper Austria until 2020. As a matter of fact, the traffic demand cannot be managed in rush hours anymore.

The availability of road-traffic real-time data is currently very limited. Besides conventional, road-sided traffic volume measurements, the mobile and section-related data capture becomes more and more important. These so called “floating car data (FCD)” offer the opportunity to consider vehicles as mobile sensors in the entire traffic, which transmit their position and their speed in order to detect the current traffic situation according to the vehicles’ movement patterns. Furthermore, modern on-board-units deliver additional real-time information (so called “extended floating car data – xFCD”) from the board computer, such as ambient temperatures, fuel consumptions, etc.



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The aim of this project is to establish a reference region in form of a development platform called “SmartFleet LivingLab” in relation to the research field “Intelligent Transport Systems for Freight”. A long and close cooperation with pre-determined fleet operators and individuals – the power users of the Upper Austrian country road network – as well as the country road infrastructure operator, the Office of the Upper Austrian Regional Government, is the primary objective with-in this project.

The purpose of this project is the generation of real time-traffic information directly transmitted by vehicles, in order to gain information of potential traffic jams or of changing weather and road conditions (anytime and for the whole province), which should be useful for the vehicle drivers. Afterwards, new insights should be produced for innovative traffic management, traffic planning and traffic control measures (e.g. intelligent traffic light controls). This approach should allow the enhancement of the traffic jam problem in Upper Austria’s central region and other sensitive points, without investing in new infrastructure.

The project team includes the University of Applied Sciences Upper Austria, RISC Software LLC, as well as Upper Austrian telematics providers, service organisations and businesses. This project is financed by financial resources from the Office of the Upper Austrian Regional Government.

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