Robust wireless communications provide remote monitoring systems for safe automated driving

# Cooperative infrastructure platform for robust wireless communication

IOWN **Evolution** Fusion and Cooperation by Network Evolution



# Background

Remote video monitoring is an essential requirement for driverless automated driving on public roads. Highly reliable wireless networks are required for remote monitoring of moving vehicles, but changes in the communication environment can cause interruptions in the monitored video.

# Summary

Highly reliable networks are realized by optimally switching and using multiple networks together based on the prediction of future communication quality using location information. Field tests have confirmed that this technology reduces video interruptions better than conventional technologies.



# Background

Remote video monitoring is a requirement for automated driving on public roads

### Issues

Videos are conventionally interrupted in areas where communication quality deteriorates rapidly

**Automated Driving Vehicles** 

# Optimal control of multiple networks based on quality prediction further reduces video interruption Route Predict Quality Predict GNSS Control Telemetry Multipath See video for more details Field demonstrations

### Features

- Quality Prediction: Highly accurate communication quality prediction by using two complementary prediction algorithms together with location information and quality history
- Multi-path communication: Stateless end-to-end virtual network allows flexible switching and use of multiple networks for a large number of connected devices
- Cooperative control: Optimal combination of proactive or reactive switching and use of multiple networks to achieve a highly reliable network

## Future\_benefits

This technology enables stable remote monitoring and contributes to the provision of safe and secure automated driving services.

# **Exhibiting Company**

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