ADP Development of an Adaptive Video Transmission Using Interframe Compression Techniques for Teleoperated Driving

Teleoperation means the remote control of a vehicle and is seen as a fundamental key factor to enable automated driving. One important part of the teleoperation system is the video streaming from the vehicle to the operator workplace via radio transmission. Hereby, different challenges like varying bandwidths and latency are encountered. Therefore, an adaptive video transmission system has to be designed, implemented and evaluated on a test bench.

Task description

- Analyzing methods on how to adapt multiple video streams using interframe compression with regard to the available bandwidth and latency
- Designing a toolchain for adaptive video streaming
- Implementing and evaluating the toolchain on a test bench

Qualifications

- Willingness to learn more about the middleware ROS
- Experience in C++ an/or Python is recommended but not mandatory

NOTICE: All projects and theses at FZD can be done in English or German, as preferred.
ANMERKUNG: Alle Projekte und Arbeiten bei FZD können wahlweise in Englisch oder Deutsch durchgeführt werden.