Improving network performance with V2X services of dispatching take-over requests and safe spot assignments in an urban transition corridor

Robert Alms & Yun-Pang Flötteröd, DLR

TransAID - Transition Areas for Infrastructure-Assisted Driving

- Transitions of Control (ToCs) and Minimum Risk Maneuvers (MRMs) may induce significant disruptions to traffic system if occurring at the same location (Transition Areas)
- Infrastructure-assisted traffic management (V2X) can help to mitigate negative impacts of control transitions

Dispatching Take-Over Request and Safe Spot Assignments

- Procedure I: Traffic management dispatches Take-Over Requests (TORs) to connected automated vehicles within the Transition Area to avoid accumulation of disruptions caused by ToCs
- Procedure II: In case of failed ToC, traffic management guides vehicle to a safe spot (e.g. free parking area) to avoid vehicles performing a full stop in lane

Simulation Results

- no traffic management
- TOR distribution
- TOR distribution + safe spot assignment