Project Ko-TAG
Cooperative Transponder for Traffic Safety

Kooperative Transponder für mehr Sicherheit im Straßenverkehr

Dr. Daniel Schwarz
BMW Group
Sensor fusion systems offer highly accurate object positions under Line-of-Sight conditions.

A communication link offers data exchange and objects classification even under non-Line-of-Sight conditions.
Idea

Onboard perception sensors (Radar, Camera)
- exact localization of objects
- validation of received data through cooperative localization

Communication (DSRC)
- classification
- transmission of data that can not be measured directly
- data transmission even without Line-of-Sight
Ko-TAG System

Integrated localization and communication unit (OBU)

Cooperative transponders (SafeTAG)
Goals

• Precise localization of cooperative objects through cooperative distance and Angle-of-Arrival measurement.
• Reuse of existing C2X standards
• Development of protocol and communication unit for efficient coordination of localization and communication functionality
• Prevention misuse
• Reliable prediction of object maneuvers by usage of inertial sensors on the SafeTAG
• Implementation of assistance systems based on cooperative transponder localization for pedestrian, bicyclist and vehicle safety
Applications – shown at the live demonstrations
Applications – shown at the live demonstrations
More applications and technical information?

Meet the experts in the sessions, at the poster booth and at the live demonstrations!
Thank you for your attention!