



Research Projekt

Montag, den 05.12.2022, 09:00 Uhr,
Videokonferenz

Forschungsprojekt:

Ahmad Naja

“Towards Toolkit for Scenario-based Approach for Autonomous Systems”

The concept of scenario-based simulation has recently been used widely in the automotive industry and aviation since it provides a broad view of the potential future, and helps to manage the test cases in a better way, which helps significantly to reduce the risks and define the safety specifications of the system. To improve and complement the safety conditions, the Operational Design Domain (ODD) defines the operational boundaries of a driving automation system to specify the scope of the safety case, represented by human and machine-readable language. Many approaches and standards that involve essential modelling and safety concepts have been introduced to represent scenario-based simulation. In addition, some parts of these approaches were implemented as graphical tools, such as SES and PES Tools, which are based on system entity structure ontology. However, an extensive implementation covering scenario modelling and management, ODD, and assessment is still missing. This paper proposes at first a new adapted scenario-based approach based on the related research. After that, the proposed approach will be implemented by a robust GUI tool called Operational Domain Modeling Environment (ODME), considered an upgrade to SES and PES projects. ODME comes to fill the gap by covering the modelling functions and safety approaches in one comprehensive environment provided with a wide range of capabilities and features.

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