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Title: Applying virtual V&V methods for scenario-based homologation of a highly automated Level 4 truck in context of the ATLAS-L4 project

Abstract:

Bringing autonomous vehicles onto the road is one of the biggest challenges the automotive industry is currently facing. This does not only concern the development of such systems regarding sufficiently precise and reliable perception and planning components, but in particular also the process and methodology to show that those systems safely operate in their intended operational design domain (ODD) and do not induce unreasonable risks.

Due to the complexity and diversity of the ODD and possible system behavior, traditional methods for homologation are no longer practically applicable because they would require to drive billions of miles in reality. Hence, new approaches are necessary to address this challenge involving in particular virtual verification and validation methods, which enable to reduce the number of miles to be driven in reality to a feasible amount.

In the ATLAS-L4 project MAN and BTC Embedded Systems together with further academic and industrial partners take up this challenge and show how the homologation of a Level 4 truck can be achieved by applying virtual verification and validation methods.