

iARGUS-CMD includes Traffic Scenario Description Converter

Closing the Gap between Traffic Scenario Simulation and Real-World Testing of highly Automated Driving Vehicles and ADAS Functionalities

When it comes to scenario-based testing of automated driving vehicles or driving functions, the definition and determination of every single scenario is crucial. In test praxis, these scenario descriptions are obtained from simulation tools like VTD, CARLA, or CarMaker and have to be matched to the proving ground infrastructure and especially to its scenario planning toolchain. A powerful interface between



simulation world and real-world testing is one of the key components for efficient testing of arbitrary test cases or even whole test catalogues.

OpenScenario for traffic scenario description together with OpenDrive for the lane definition are one of the most powerful bundles, called OpenX, used for complex traffic scenario representations, worldwide. Unfortunately, neither OpenX nor any other known traffic scenario representations is designed to cover all features being required for proving ground testing, because they are designated to the simulation world, only.

Therefore, with **iSCAML** iMAR Navigation has established a meta-language (iMAR **Scenario Description Advanced Meta Language**), which covers both, the scenario description requirements from the proving ground testing community and the needs from the simulation tool providers. Thus, iSCAML extends OpenScenario and other scenario description languages (on request converters to ROAD5 etc. can be established) by significant features like advanced possibilities for the definition of dependencies and triggers or the parametrization of lane change dynamics etc.

The proving ground control center software **iARGUS-CMD** as part of **iSWACO-ARGUS**, one of the leading proving ground instrumentation toolchains for automated testing and validation of automated driving vehicles up to SAE

Level 5 and ADAS functionalities, comes with an integrated data converter to import, validate, match and execute OpenX traffic scenario data. This importer converts OpenX data into iMAR's scenario description language iSCAML. Please feel free to contact iMAR sales engineers for further details.

Additionally, iMAR's iARGUS-CMD software offers the capability to create iSCAML traffic scenario files without any input file and has beyond this, predefined scenarios available out of the box, focusing EuroNCAP tests.

With its leading technology, iMAR provides the link between simulation and real-world testing on the proving ground and ensures high-efficient testing of most complex scenarios with multiple participants and also with challenging dependencies between the moveable objects and also with the proving ground's infrastructure elements like traffic lights, wind generators etc.

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