AVL Team SUITE

AVL CAMEO 4™

for Simulation Environment

AVL CAMEO 4™ as part of an efficient tool chain for attribute-driven development of ADAS systems

THE CHALLENGE

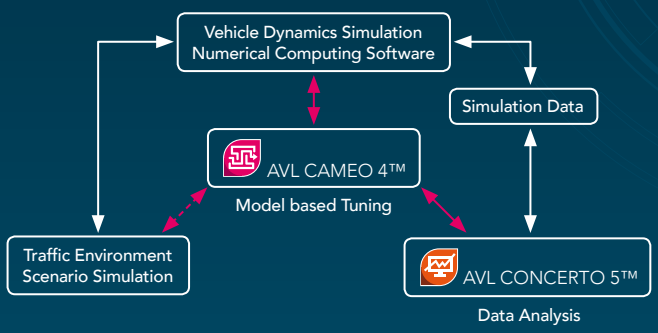
A large-scale industrial development process for autonomous vehicle requires new, efficient and easy-to-use testing tools. This will allow an early validation of the desired targets for vehicle attributes like safety, performance, efficiency and comfort.

THE ADDED VALUE

- **Early problem detection** and cost savings by front loading development processes.
- **Support of variant tuning** ("comfort", "sporty", etc.) using a model based approach and solving multi-criteria optimization problems within one environment and tool
- **Re-use of knowledge** as results are reproducible and traceable

THE AVL SOLUTION

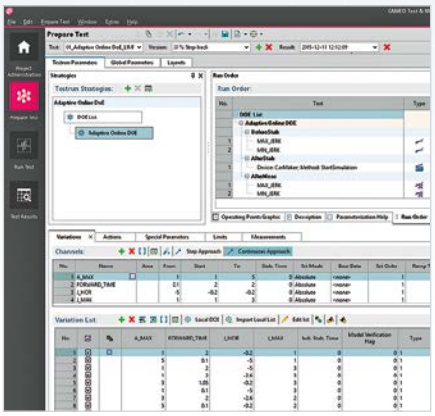
AVL CAMEO 4™ for Simulation Environment is a powerful tuning and optimization tool, providing proven AVL CAMEO 4™ methodology for simulation environments. The portfolio of interfaces to multiple simulation systems allows a holistic testing and validation platform.



THE PROCESS OF MODEL BASED TUNING OF AN ADAS SYSTEM powered by AVL CAMEO 4™

PROCESS	ACTIVITY

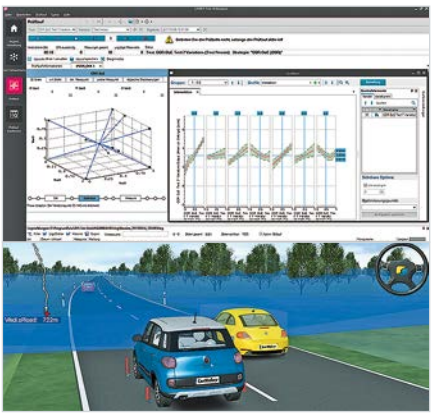
TASK & TEST PLANNING



Connect and upload the simulation systems needed and define

- The range of simulated scenarios
- Tuning task targets (KPIs)
- Input variables / factors
- Active DoE (Design of Experiments):
  – Start design
  – Test limits
  – Adaptive design correction

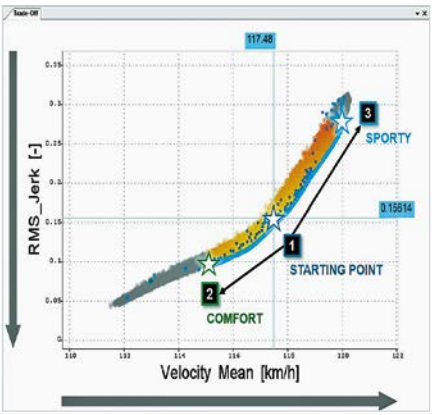
TEST EXECUTION & AUTOMATION



Drive the development environment interactively

- Send input variations
- Call simulation to be executed and evaluated
- Adapt to test limits
- Concentrate information gathering in the area of interest (KPIs)
- Measure performance-indicating channels (KPIs)

VARIANT TUNING



Evaluate the measured KPIs

- Generate models of KPIs to understand ADAS function behavior
- Optimize the function tuning in order to reach desired response values (e.g.: comfort mode vs. sporty mode)
- Optional (if required): Export the models as FMUs and reuse them in your simulation environment

FOR FURTHER INFORMATION PLEASE CONTACT:

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