# Implementers Forum ASAM OpenSCENARIO V2.0

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# **OpenSCENARIO 2.0**

V2.0 Releasing Summer 2021

- Includes:
  - Domain Specific language for scenario descriptions (concrete <-> abstract)
  - Domain Model for the domain addressed by the DSL → closed-loop system testing for automotive functions
  - Guidelines on using OpenSCENARIO 2.0 in different scenario-driven workflows
- Fully compatible with V1.x versions
  - → "The runtime behavior of scenarios converted from 1.x to 2.0 will be the same"
- See the <u>concept paper</u> for details of some of the concepts



# **OpenSCENARIO 2.0 – Ensuring a shared Understanding**

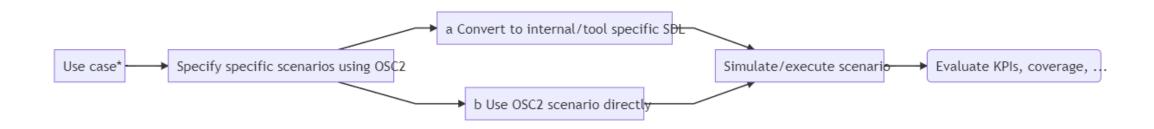
- Implementer Forum
  - Goal: ensure a shared understanding of how the language is used to describe scenarios as it develops
  - Define a set of benchmark/reference scenarios
  - Members of the forum describe a set of reference scenarios based on their understanding of the current draft of the OSC 2.0 language.
- Feedback to OSC dev. project on:
- 1. Implementability of use cases defined in "OSC2:U&P" using current language features
- 2. Feasbility of OSC-Features for the described use cases Can the scenarios actually be executed (throughout the whole chain, from description to simulation & evaluation)
- 3. Feedback to feature subsets group "useful" subset definitions
- 4. Priorization of features for OSC 2.0 i.e. figure out which features are actually needed by the current use cases and e.g. allow for reduced scope
- 5. Preciseness & unambiguity of semantics of used features



# Working Mode (as proposed by BTC)

- The proposed approach is split into 3 working groups:
  - 1) Define ADS use cases for the use of OSC 2 (one example is the ALKS Regulation)
  - 2) Describe scenarios that demonstrate the use cases
  - 3) Simulate/execute these scenarios in some tooling with either of 2 approaches:
  - a) Either add support for the OSC 2 features into tooling
  - b) Or convert the OSC 2 descriptions to an internal format and then execute

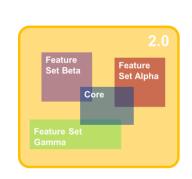
Feedback will regularly be exchanged with the development project.





#### **OpenSCENARIO 2.0 – Feature Subsets**

- Implementation of a new standard with such a large scope is not instantaneous
  → Iterative support in existing tooling
- See e.g. OSC 1.0
- Modular language support through feature subsets
- Allow for clearly delineated, partial support for the specification





Feature subsets in OSC 2.0

Source: OSC 2.0 Project meeting (Michael Kluge)



#### **Feature Sets**

How the relation might look like...

Initial Conditions	X					
Replay	X	X				
Basic Declarative	X					
Reactive	X					
OSC 1.x	X					
Test Definition	X					X
Feature Sets						
Language Concepts	Core	Temporal Aspects	Temporal Compositions	Modifiers	Contraints	Coverage



# **Eclipse Foundation**

Could the Eclipse Foundation support us?

ASAM is an Associate Member of the Eclipse Foundation and is about to intensify collaboration. There are several things where both sides could benefit:

- Possible usage of the OpenPASS Simulator and maybe further Eclipse technology projects
- Support in implementation and definition tasks by Eclipse Automotive Working Groups
- Increase OSC2 visibility in the Eclipse community and extend network
- Eclipse Foundation is experienced in open source projects and management and provides a legal framework for open source









# Thank you for listening!

