

ASAM

Standards for the Automotive Industry

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ASAM e.V.

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Höhenkirchen



ASAM - Introduction

Compliance Statement

For more than 20 years, ASAM e.V. (Association for Standardization of Automation and Measuring Systems) is actively promoting [standardization within the Automotive Industry](#). Together with its more than 290 members worldwide, the association develops standards that define [interfaces and data models for tools used for the development and testing of electronic control units \(ECUs\)](#) and for the [validation of the whole vehicle](#).

ASAM standards are [recommendations](#), they do not have an impact on regulatory framework.

From the beginning, ASAM has requested and encouraged an open exchange among all [stakeholders: manufacturers, suppliers, tool vendors and research institutes](#). Following this ASAM policy, technical experts from ASAM member companies worldwide commonly [develop new standards in project groups](#). The developed standards are [accessible for all interested companies](#) and serve as basis for the development of tools and ECUs within the respective companies worldwide. Tools and products developed based on ASAM standards allow [easy integration](#) into existing value chains and [seamless data exchange](#).

ASAM project groups [do not define products or take any business decisions](#) preventing competition.

Prof. Dr. Marcus Rieker
Chairman of the Board of Directors

Dr. Klaus Estenfeld
Managing Director

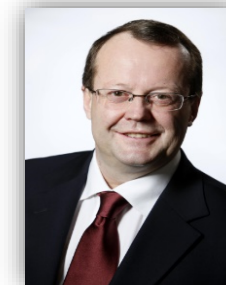
<https://www.asam.net/home/about-asam/compliance.html>

Organization

Board of Directors

Voluntary Representatives from International Tier-1s, Tool Vendors and Research Institutes

- Prof. Dr. Frank Köster
DLR
- Dr. Ralf Nörenberg
HighQSoft GmbH
- Prof. Dr. Marcus Rieker, Chairman
HORIBA Europe GmbH
- Armin Rupalla
RA Consulting GmbH
- Richard Vreeland
Cummins Inc.



Technical Steering Committee (TSC)

A Highly Experienced International Team of Experts from Automotive Industry

- AVL LIST GmbH

Dr. Gerald Sammer



- BMW AG

Michael Schwarzbach



- Continental AG

Helmut Wellnhofer



- dSPACE GmbH

Dr. Hans-Joachim Rabe



- emotive GmbH

Dr. Jörg Supke



- ETAS GmbH

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- National Instruments Corp.

Stefan Romainczyk (Speaker)



- Softing GmbH

Markus Steffelbauer



- Siemens Industry Software GmbH

Oliver Philipp



- Vector Informatik GmbH

Dr. Christoph Dallmayr



More Than 290 Member Organizations Develop and Apply ASAM Standards



Some Highlights (2019/2020)

ASAM actively drives its evolution – inside and outside

- [Services for ASAM members worldwide](#) (members in 27 countries)
ASAM International Conference 2019, ASAM General Assembly 2020, ...
- [New Standards Related Activities](#)
 - New domain “Simulation” established, high interest worldwide
 - Five ASAM OpenX projects identified, first releases in March 2020
 - First successful local Concept Project outside Europe finished
 - First standard development outside Europe, release in March 2020
- [Next Steps towards Internationalization](#)
 - Local entry in China (C-ASAM)
 - Re-vitalization of North American Activities
 - Requests from Korea
 - First ASAM members in Canada, Croatia, Israel, Romania, Slovenia, Spain,
- [A Recognized Partner in the Standardization Community](#)
Liaison Agreements with ISO, MoU with SAE, AUTOSAR Attendee Agreement, ...
-



Standardization Activities

ASAM Standards Portfolio

Data Management & Analysis

CEA ODS

Measurement & Calibration

CDF CPX MCD-1 CCP / XCP
MCD-1 POD MCD-2 MC MDF
MCD-2 CERP

Test Automation

ACI ASAP 3 ATX GDI
MCD-3 D MCD-3 MC XIL

Diagnostics

MCD-2 D MCD-3 D
OTX Extensions

Software Development

CC FSX ISSUE LXF
MBFS MDX

ECU Networks

MCD-2 NET

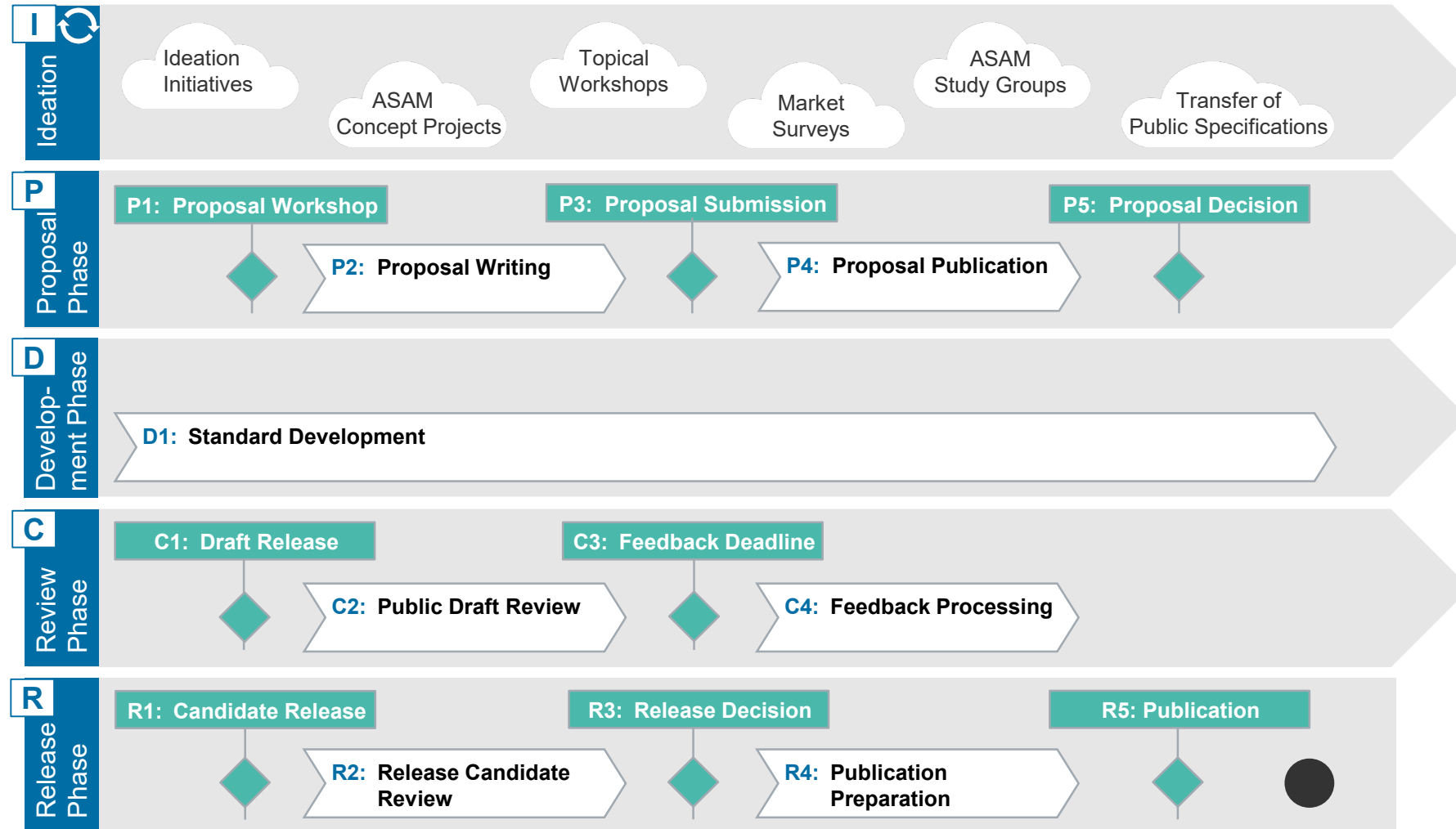
Simulation

OpenX standards



ASAM Development Process for Standards

From First Ideas to New Standards



A New ASAM Domain for Highly Automated Driving

ASAM OpenX Standards for Driving and Traffic Simulation

New Domain at ASAM: Simulation



Simulation

- Standards for [simulation model data exchange](#).
- High demand for standards for new type of simulation: [Driving and Traffic Simulation](#).
- Public specs driven by tool vendors have emerged in recent years.
- **Specs have been transferred to ASAM to:**
 - **Become official standards for the industry**
 - **Be hosted by a neutral professional organization**
 - **Guarantee long-term and professional further development**
- Current projects have been transferred to ASAM:
 - [OpenDRIVE](#)
 - [OpenCRG](#)
 - [OpenSCENARIO](#)
 - [Open Simulation Interface \(OSI\)](#)
- Next standards in ideation ...

Transfer of OpenDRIVE® to ASAM

In September 2018, a real success story at ASAM began



Open
Dynamic
Road
Information for
Vehicle
Environment

Positioning of ASAM OpenX Standards

ASAM OpenDRIVE

- Road Network



ASAM OpenCRG

- Road Surface



ASAM OpenSCENARIO

- Driving Maneuvers



Static Content

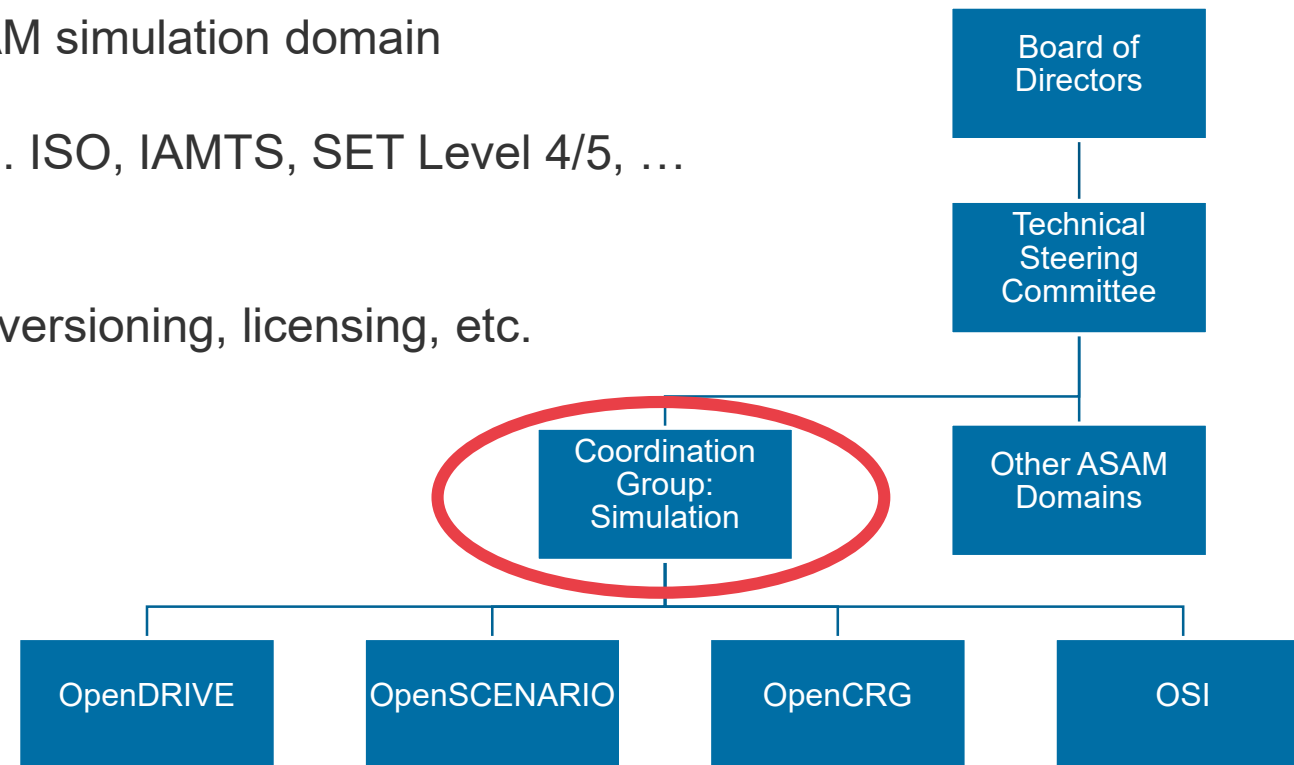
Dynamic Content

- **Motivation**
- Exchange of data between creation tools (e.g. road network editors) and simulators.
- Use of the data in simulators from different vendors.
- Use with other public standards.

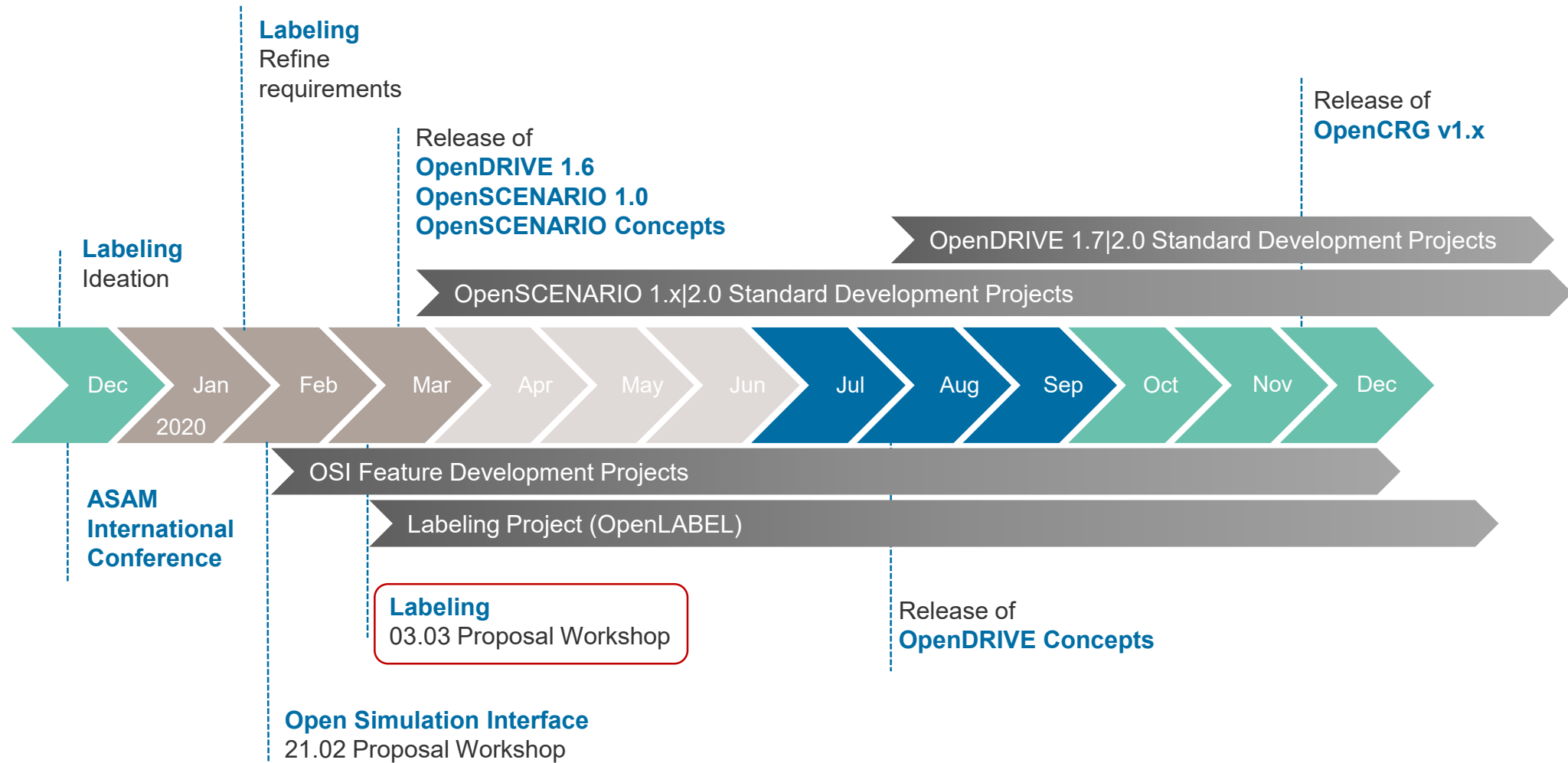
Coordination Group: Simulation

Organization and Purpose

- Strategic (whitespace) analysis of the automotive domain
 - Identify potential for further standardization within the simulation domain and initiate activities - (include external)
 - Develop and maintain a roadmap of the ASAM simulation domain
 - Ensure no overlap of standards
 - Ensure alignment with external activities, e.g. ISO, IAMTS, SET Level 4/5, ...
- Review and refine relevant processes
 - e.g. release process, development process, versioning, licensing, etc.
 - new project models
- General internal topics (governance)



Timeline 2020



Thank you!

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For more information
on ASAM visit

www.asam.net