ASAM OSI 4.0 Proposal Workshop

Flatbuffers and Performance

Stefan Cyliax

20. Januar 2022
München

Welcome! We start at 10:05.

Take note that this meeting will be recorded.

ASAM Association for Standardization of Automation and Measuring Systems

Purpose of todays meeting

Proposal workshop for ASAM OSI® 4.0

Kickstart phase that looks at

1. performance when using ASAM OSI® and
2. a possible switch to Google FlatBuffers for OSI 4.0.

We need your feedback from real applications of ASAM OSI!

Other topics:

- General overview over the current developments in the project
- What else is planned for major release OSI 4.0

Agenda

When	What	Who
10:00 – 10:05	Arrival	-
10:05 – 10:10	Welcome and Agenda	Stefan Cyliax (ASAM)
10:10 – 10:15	Introduction to ASAM OpenX	Stefan Cyliax (ASAM)
10:15 – 10:45	Current Developments in the OSI Project	Kmeid Saad (Ansys)
09:55 – 10:45	Towards ASAM OSI® 4.0	Kmeid Saad (Ansys), Pierre Mai (PMSF)
10:45 – 12:00	OSI Performance and FlatBuffers	Philipp Rosenberger (Persival), Clemens Linnhoff (Persival)

Intro ASAM and OpenX

ASAM

Who we are and what we do

- **Non-profit standardization organization** within the Automotive Industry
- Focus on **implementation level standards** (rather than the process level standards of e.g. ISO/SAE)
- ASAM standards are **recommendations**, they do not have an impact on regulatory framework
- **Open, non-competitive** standard development groups
- **Membership driven** standardization projects

ASAM Membership

Around 350 Member Organizations Develop and Apply ASAM Standards

OEMs

Tier-1 Suppliers

Tool Vendors / Service Providers

Universities / Research Institutes

Status: Feb 2021

ASAM

ASAM Standards Portfolio

ASAM is currently active in 7 domains

Simulation

OpenCRG | OpenDRIVE | OpenSCENARIO | OSI | OpenLABEL

Measurement & Calibration

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

Data Management & Analysis

CEA | ODS

Diagnostics

MCD-2 D | MCD-3 D

Test Automation

ACI | ASAP 3 | ATX | GDI | iLinkRT | MCD-3 MC | XIL | OTX Extensions

ECU Networks

MCD-2 NET

Software Development

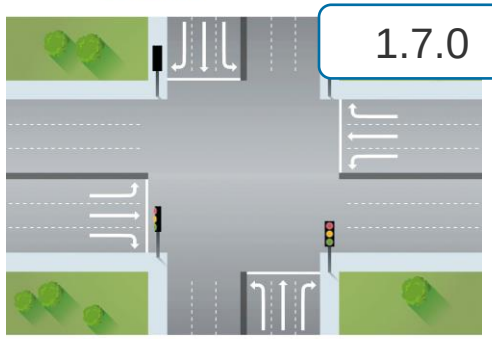
CC | FSX | ISSUE | LXF | MBFS | MDX

https://www.asam.net/standards/

An Overview of ASAM OpenX…

8 individual standard initiatives

ASAM OpenDRIVE®



1.7.0

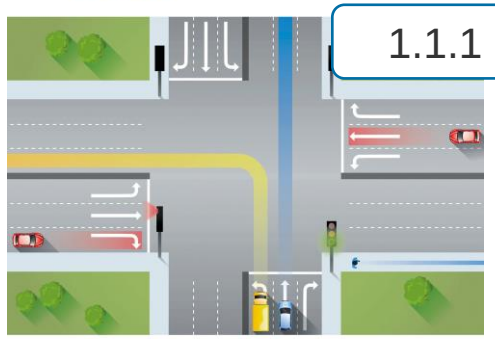
Static Road Network Desription

ASAM OpenCRG®

1.2.0

Static Road Surface Desription

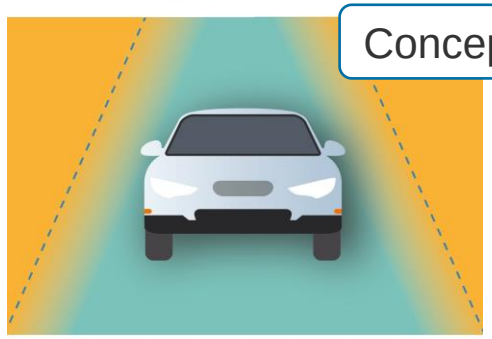
ASAM OpenSCENARIO®



1.1.1

Dynamic Scenario Desription

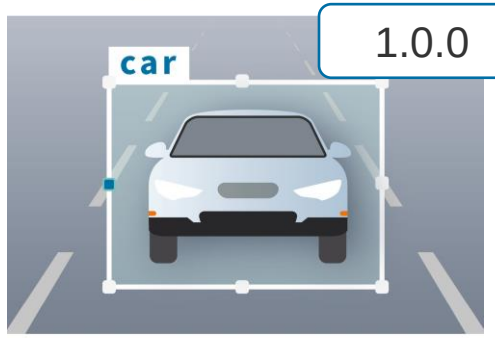
ASAM OpenODD



Concept

Defining the Operational Design Domain for Automated Vehicles

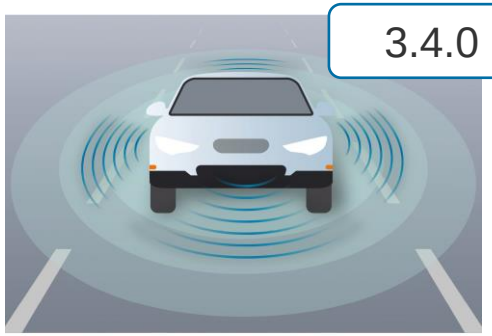
ASAM OpenLABEL



1.0.0

Standardized Labeling for objects and Scenarios

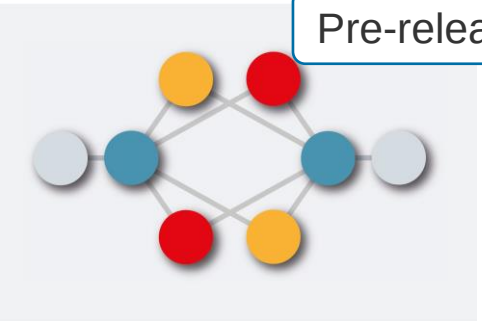
ASAM OSI®



3.4.0

Interface for Simulation

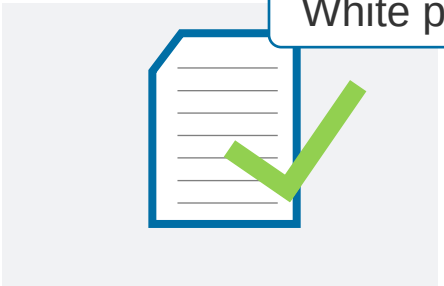
ASAM OpenXOntology



Pre-release

Core Domain Model for the ASAM Simulation Domain

ASAM Study Project Test Specification



White paper

Analysis and harmonization of automotive testing techniques and standards

Current Developments in the OSI Project

Conclusion

We need your feedback to flatbuffers and how they impact performance.

There will be regular updates on the mailing list. Get in contact to be added.
→ stefan.cyliax@asam.net

Join the project!
→ ASAM Open Simulation Interface (OSI) (github.com)

Questions? Get in contact!
→ stefan.cyliax@asam.net

Thank you for your attention!

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ASAM