ASAM OpenDRIVE 1.7.0 and 1.8.0 Proposal Workshop

April 15th, 2021

ASAM Association for Standardization of Automation and Measuring Systems

Organizational Remarks

This meeting is a public meeting. It is NOT restricted to only ASAM members. Antitrust Rules apply.

Recording of this Teams Meeting

It is prohibited According to the General Data Protection Regulation (GDPR), in effect since May 25, 2018, all concerned people must be informed comprehensively in accordance with Art. 13 DSGVO if data of the people are processed (collected, saved, forwarded, deleted, etc.). This includes photos as well as audio and video recordings (independent of location and time of the recording). The participants have not given their written consent for recordings. It is therefore prohibited by European law for any participant or other party to record this livestream. You will find the presentations as well as the meeting minutes on the ASAM Website after the event.

Thank you!
ASAM e.V.

ASAM

Agenda

Agenda			
10:00 AM	**10:05 AM**	Arrival and Welcome	Nicco Dillmann (ASAM)
10:05 AM	**10:15 AM**	Introduction to ASAM	Peter Voss & Nicco Dillmann (ASAM)
10:15 AM	**11:00 AM**	Going through Project Proposal	All
11:00 AM	**11:30 AM**	OpenCRG Pull Request -> 1.7	Thomas Bleher (BMW)
11:30 AM	**11:50 AM**	Semantic Traffic Sign Model -> 1.8	Esther Hekele (Hexagon)
11:50 AM	**12:30 PM**	Break	All
12:30 PM	**12:50 PM**	Traffic Light Modelling -> 1.8	Daniel Becher (3D-Mapping)
12:50 PM	**1:20 PM**	OpenDRIVE Conformity Test 1.7 / 1.8	All
1:20 PM	**2:00 PM**	Orga & Next Steps: • Enrollments / Participation • OpenDRIVE Validator OS Dev • Project Lead	Nicco Dillmann

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Project Proposal
Content of OpenDRIVE 1.7.0 vs. 1.8.0

Content of the Releases

OpenDRIVE 1.7.0 (Release July 2021)

Issues:

- #18: Overlapping bike lanes
- #22: details difficult to find in documentation
- #39: short lane sections
- #42: U-Turn Example
- #43: Link related topics
- #49: LaneValidity vs. Orientation
- #50 : Object-CRGs

Concepts:

- Direct Links

OpenDRIVE 1.8.0 (Release November 2022)

Issues:

- #10 Lane height with applied superelevation and elevation
- #16 Modelling/Handling of double markings
- further issues will be added to the project in accordance with the available ressources

Concepts:

- External Object Reference
- Interface to other GIS Standards
- Prohibit combination of shape and superelevation
- Junction modelling: junction road and junction borders
- Object Lists
- Specify length of virtual junctions
- further concepts will be added to the project in accordance with the available ressources

ASAM

OpenDRIVE Conformity Test

Goal:

The goal of the conformity test is to check the exchangeability of OpenDRIVE files and how this can be improved.
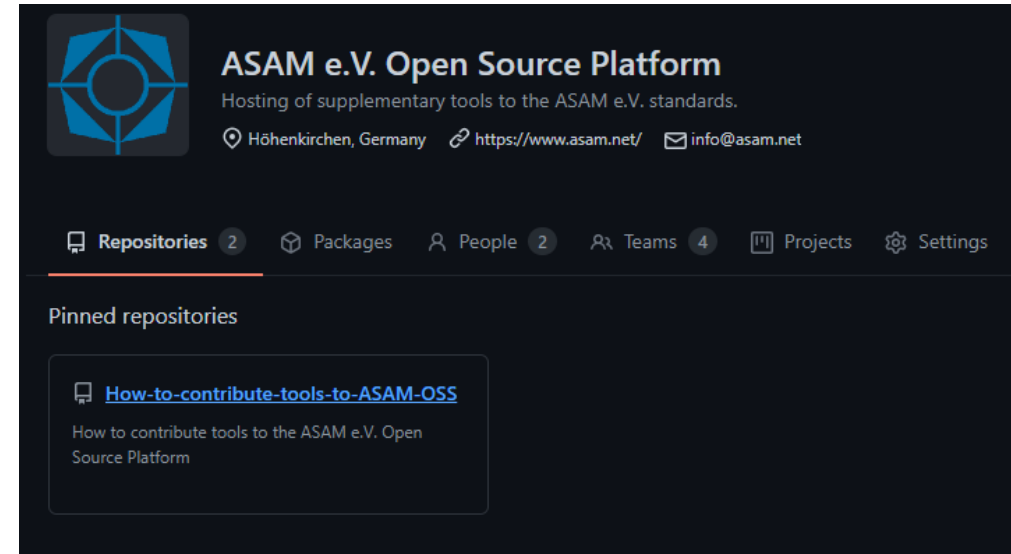
Kickoff an OpenSource Project to implement:

- OpenDRIVE Syntax Checker
- OpenDRIVE Semantic Checker according to Rules

In the OpenDRIVE Project the CCB for the OpenScoure Project will be setup.
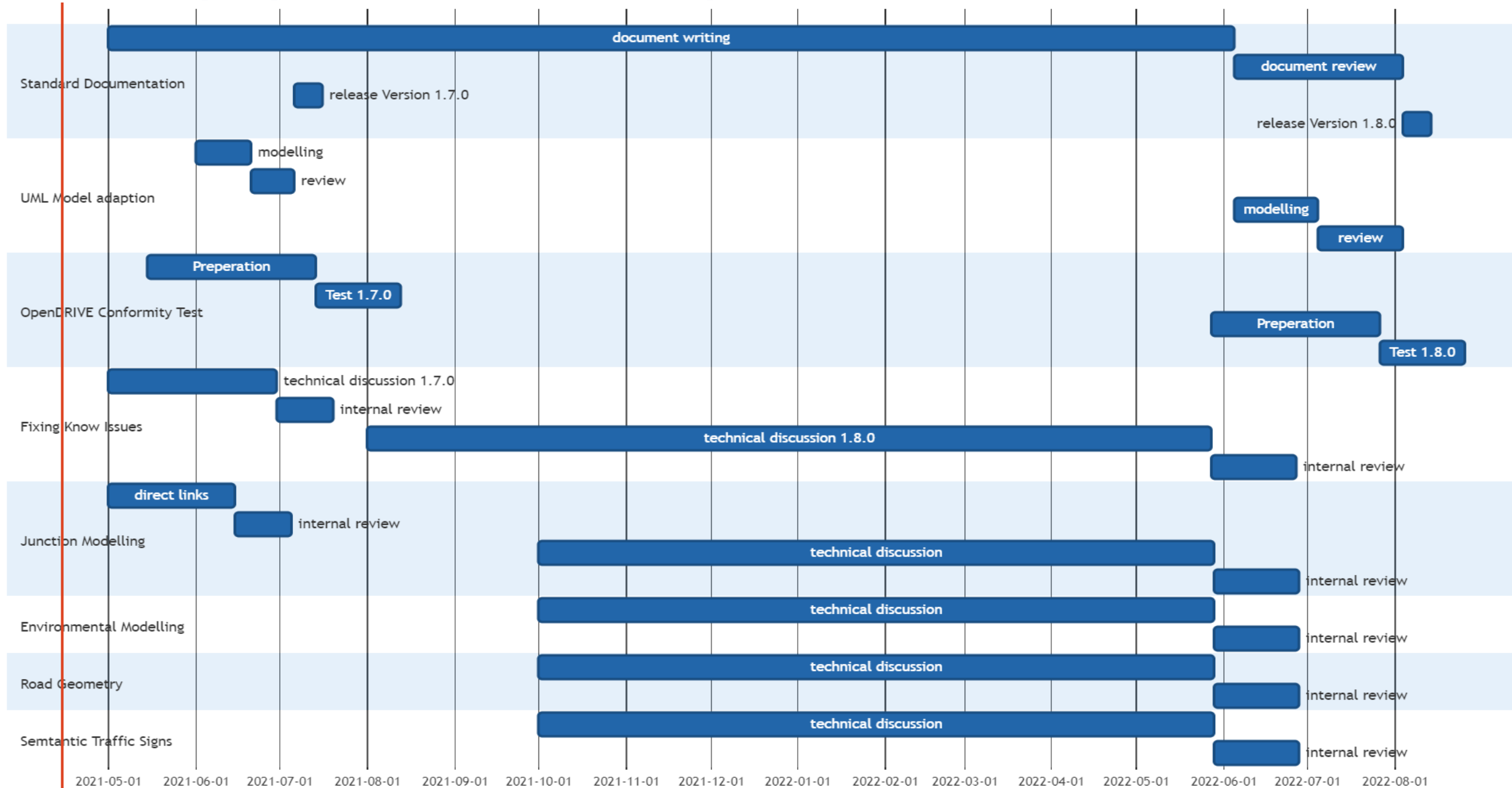
Needed Resources:

Simple and complex example xodr files for the development.

https://github.com/asam-oss

Roadmap OpenDRIVE 1.7.0 and OpenDRIVE 1.8.0

Needed Resources for the Workpackages

Open for Discussion

Description	Deliverable	Effort (Man-days)
Standard Documentation	•OpenDRIVE 1.7.0 (July 2021) •OpenDRIVE 1.8.0 (Nov 2022)	240 days
UML Model adaption	•UML Model 1.7.0 (July 2021 •UML Model 1.8.0 (Nov 2022)	50 days
OpenDRIVE Confomitiy Test	•Test Report 1.7.0 •Test Report 1.8.0	240 days
Fixing known issues for 1.7.0	n.a.	40 days
Direct Links	n.a.	30 days
Fixing known issues for 1.8.0	n.a.	100 days
Junction Modelling	n.a.	240 days
Environmental Modelling	n.a.	200 days
Road Geometry	n.a.	240 days
Semantic Traffic Signs	n.a.	80 days

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Enrollment and Commitment

- ASAM Membership required

- Minimum Commitment 40days

- Recommended Commitment 60 days from May 1st 2021 – 30th November 2022

- Link to enroll: https://www.asam.net/project-detail/asam-opendrive-v180

Doodle to setup the Kickoff Meeting
https://doodle.com/poll/er3c446p72snh23a?utm_source=poll&utm_medium=link

Thank you for attending today.

Stay safe!

ASAM

Example: stop signs

	Germany	US	Japan
type	206	R1	?
subtype	-1	1	?

ASAM OSI3 main sign type: TYPE_STOP

Example: speed limit signs

Germany   US   Japan

Revision	2013	2017		
type	274	274	R2	?
subtype	56	60	1	?
Value	60	60	50	50
Unit	km/h	km/h	mph	km/h

ASAM OSI3 main sign type: TYPE_SPEED_LIMIT_BEGIN

Special Cases

TRUCKS 40 = 60 🚛

1 Sign in the US , 2 sign in Europe
2 semantic information in one sign

ASAM OSI3 main sign type: TYPE_SPEED_LIMIT_BEGIN
ASAM OSI3 supplementary sign type: TYPE_CONSTRAINT_TO=ACTOR_TRUCKS

4-WAY ◆

Examples of sign / rule does not exist in all countries

200 m

2 semantic information in one sign

No ASAM OSI3 yet

HEXAGON | VIRES