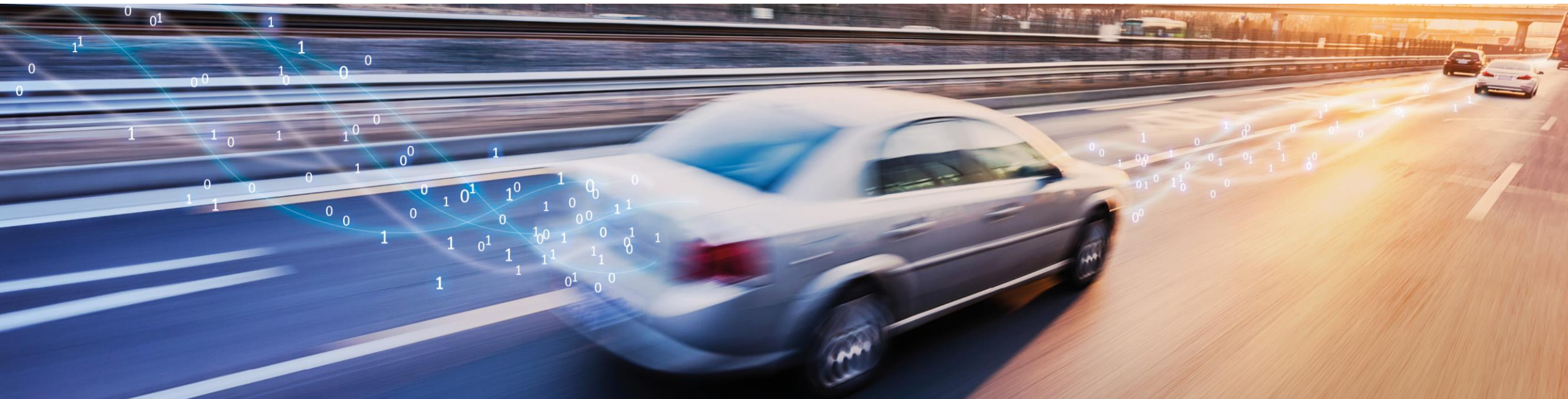


Session E

Implementation Project for OpenDRIVE

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ASAM Implementation Projects

Purpose

- Create supplementary products that support the application of ASAM standards.
- Examples:
 - Source code as a starting point for commercial product development.
 - Libraries (e.g. DLL), which can be integrated in commercial tools and provide standard functions.
 - Reference implementations that demonstrate intended tool behavior.
 - API behavior compliance checking.
 - File format checking.
 - Standard file format conversion.

Not a Purpose

- Compete with commercial tools.
- Profit-making.

Proposals for Implementation

P001: Reference Visualization and
Checker Tool

P002: Reference Examples

P003: Best Practices Guide

Proposals for Implementation

P001: Reference Visualization and Checker Tool

P002: Reference Examples

P003: Best Practices Guide



- Schema validation: checking the standard compliance of syntax and structure of the XODR-file.
- Content validation: checking the plausibility, consistency, logical coherence, realism, completeness and unambiguity of the data in the XODR-file.
- Dynamic validation: run simulation, observe behavior and constantly check the behavior against specific rules.
- Reference visualization: showing how the data from XODR-files shall be rendered.
- Statistics: providing statistical data about what kind of data, features and attributes are contained in the XODR-file.

Proposals for Implementation

P001: Reference Visualization and Checker Tool

P002: Reference Examples

P003: Best Practices Guide

The examples shall serve as a reference for the implementation and validation of tools with the following purposes:

- show XML code-patterns as an example to better understand the XODR file format,
- provide test-cases for tools to validate data import and correct processing & rendering of the data.

Proposals for Implementation

P001: Reference Visualization and
Checker Tool

P002: Reference Examples

P003: Best Practices Guide

A document shall describe with the help of examples, what are good methods and styles for describing an item.

It shall help to choose the easier from all available description methods, and help to choose those that are most likely supported by the majority of tools.

Discussion

Questions, comments or changes to the proposed implementation projects?

- In most companies with a self-developed checker tool, the OpenDRIVE Manager from Vires is used as an importer.
- Proposal: Would need a language for specifying checker-rules, so that users can add their own (domain-specific) rules to the checker-ruleset.
- Proposal: Sources of the tool should be openly available.

Results of Project Prioritization

Features

P001	Reference Visualization and Checker Tool	:	~90% of all companies
P002	Reference Examples	:	16 companies
P003	Best Practices Guide	:	3 companies

Proposals for Implementation

Develop a framework that can execute tests and report results based upon the following features:

- A. Schema validation: checking the standard compliance of syntax and structure of the XODR-file.
- B. Content validation: checking the plausibility, consistency, logical coherence, realism, completeness and unambiguity of the data in the XODR-file.
- C. Dynamic validation: run simulation, observe behavior and constantly check the behavior against specific rules.
- D. Reference visualization: showing how the data from XODR-files shall be rendered.
- E. Statistics: providing statistical data about what kind of data, features and attributes are contained in the XODR-file.

Useful?

+100%

100%

8

~90%

2

Top Priority?

2

21

1

5

0

Key Points for Project Planning

Is there a heightened likelihood that your company would send an expert to this project?

- 7 companies would probably participate in a project.

Key Points for Project Planning

Would your company be interested to transfer or contribute an exiting tool to ASAM as a starting point for this project?

- Tesis: (without promise) could potentially contribute visualization tool.
- Audi: (without promise) could potentially contribute architecture for a checker framework.
- Siemens: (without promise) could potentially contribute architecture for a checker framework.
- Vires: (without promise) could potentially contribute a library for parsing and importing XODR-files.

Key Points for Project Planning

Preferences for meeting frequency and duration?

- About every 6 weeks for 2 days.

Key Points for Project Planning

Expectation for the end of project and release date?

- Would be a strong message to the market and new users to have the tool along with the first ASAM release of OpenDRIVE.
- Question to be clarified: Pricing for the tool? Free for all?

Key Points for Project Planning

Volunteer for writing the project proposal?

- Thesis

Thank you!

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