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Motivation of OpenDRIVE 1.6

Aim to convert the OpenDRIVE 1.5 Standard to ASAM

ASAM OpenDRIVE®

- ASAM OpenDRIVE provides the exchange format specification to describe static road networks for driving simulation applications.
- The primary task of ASAM OpenDRIVE is the road description including objects along the road.
- The OpenDRIVE Specification covers the description on how to model e.g. roads, lanes, junctions.
- Dynamic content like Cars and pedestrians are not covered by ASAM OpenDRIVE.
What's new OpenDRIVE 1.6

• A UML Model has been made from the previous .xml syntax.
  • Schema and tables are now created automatically.
• The document was given a complete new clear information architecture.
• Terms have been cleaned. Many redundant terms in the explanations have been removed.
• Many inconsistencies in the documents have been removed.
• Most chapters have been completely re-illustrated
• The illustrations have been given a consistent colour coding.
• Introduction of a basic set of rules for the individual elements.
  Some rules had to be defined as recommendation due to backward compatibility reasons
• The Style Guides from VIRES, BMW and Daimler were as far as possible incorporated into the standard.

Basis for compatibility were existing and working OpenDRIVE files.
  – not the OpenDRIVE 1.4 nor 1.5 schema files (these schema files contained errors)
Backward Compatibility

- OpenDRIVE 1.6 is backward compatible to OpenDRIVE 1.4 and OpenDRIVE 1.5 xml files (not the schema files).
- Issues that were deprecated for at least since OpenDRIVE 1.4 have been removed:
  - Neighbor
  - crossfall
- The following geometric definition has been defined as deprecated:
  - Cubic polynom
Deliverables

Documents
• OpenDRIVE 1.6 Specification:
  • PDF
  • HTML

Supplementary Files
• xsd schemas
• UML Model as html Export
• Example and use case files
• OpenDRIVE Signal Catalog
Relation to other Standards

Relation of ASAM OpenDRIVE to OpenCRG and OpenSCENARIO

- ASAM OpenDRIVE defines a storage format for the static description of road networks.
- In combination with ASAM OpenCRG it is possible to add very detailed road surface descriptions to the road network.
- To add dynamic content ASAM OpenSCENARIO is needed.

Combined all three standards provide a scenario-driven description of traffic simulation that contains static and dynamic content.
Retrospective

• A lot more was done than initially expected.
• This made the time schedule very tight.
• It took a few meetings for the team members to get to know each other. We became a great team, and everyone contributed in a very constructive way to get this result.
• We had superb support from Nicco Dillmann.
Outlook

• OpenDRIVE Concept project is planned for August 2020

• Future improvements for the next OpenDRIVE version are defined in the concept paper.

• Based on the upcoming concept paper the next project proposal can be defined.