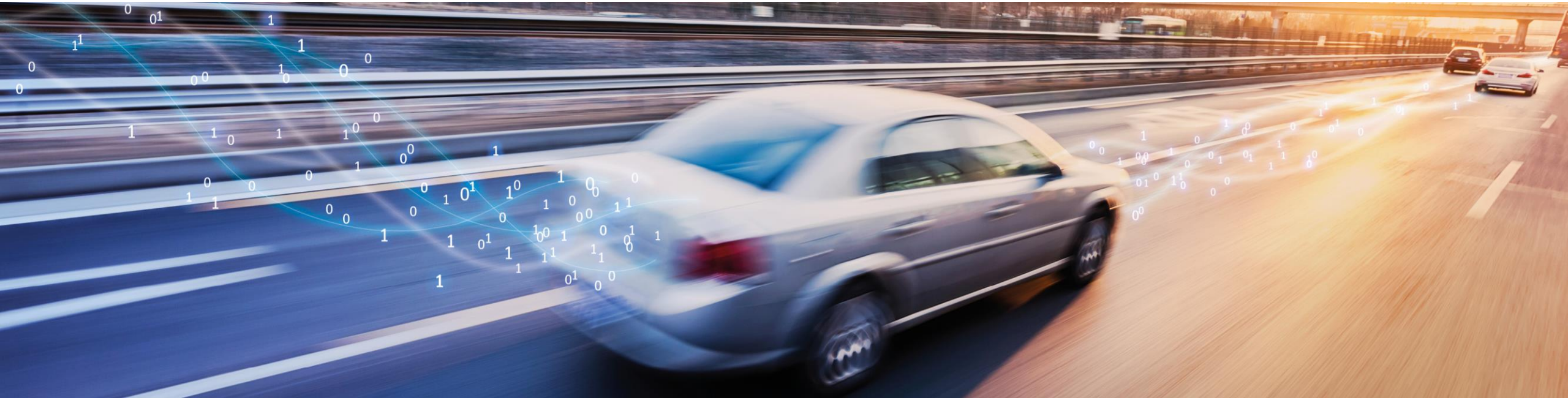
ASAM OpenDRIVE 1.7.0 Release

April 15th, 2021



ASAM Association for Standardization of Automation and Measuring Systems

Agenda

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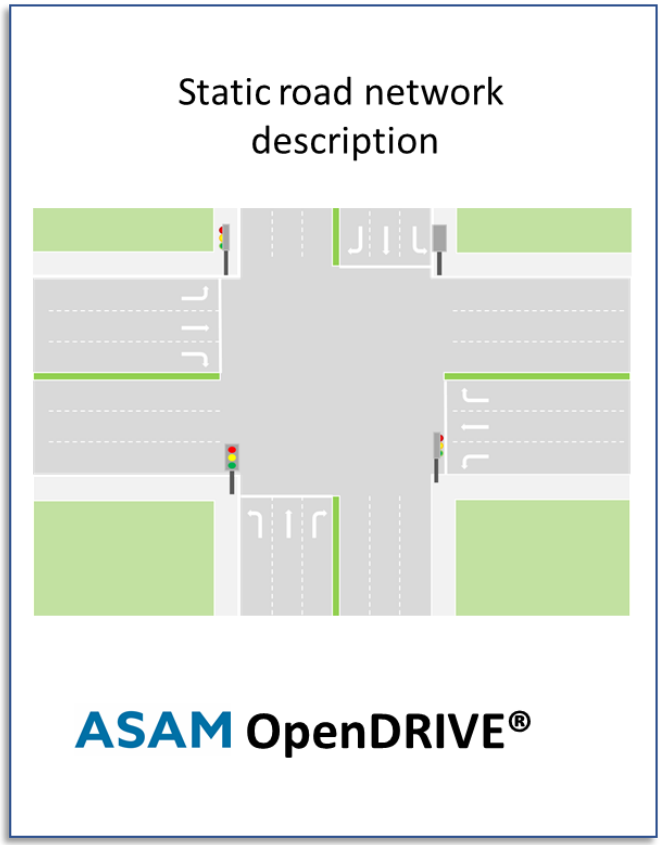
2	About OpenDRIVE 1.7
3	What's new OpenDRIVE 1.7
4	Release Contents OpenDRIVE 1.7
5	OpenDRIVE 1.8
6	OpenDRIVE Conformity Test

Motivation of OpenDRIVE 1.7

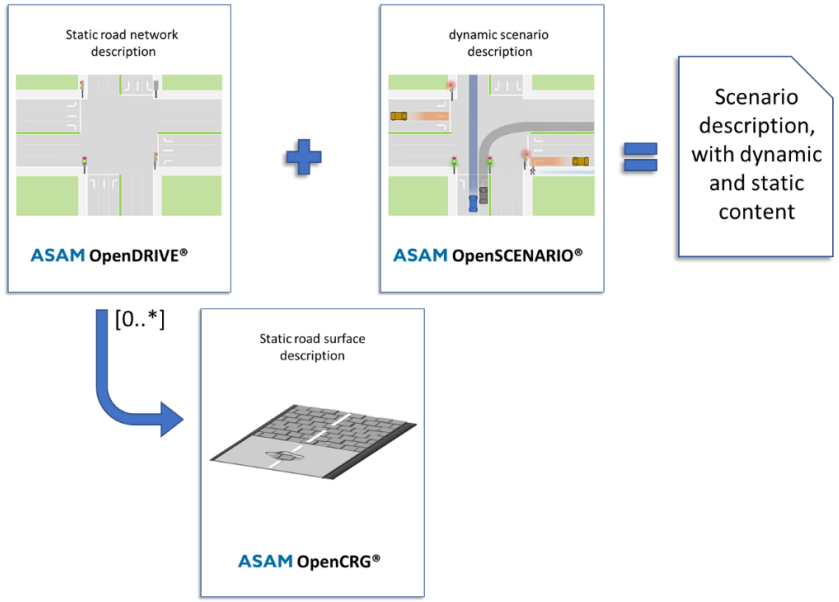


- ASAM OpenDRIVE provides the exchange format specification to describe static road networks for driving simulation applications.
- The primary task of ASAM OpenDRIVE is the road description including objects along the road.
- The OpenDRIVE Specification covers the description on how to model e.g. roads,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

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.

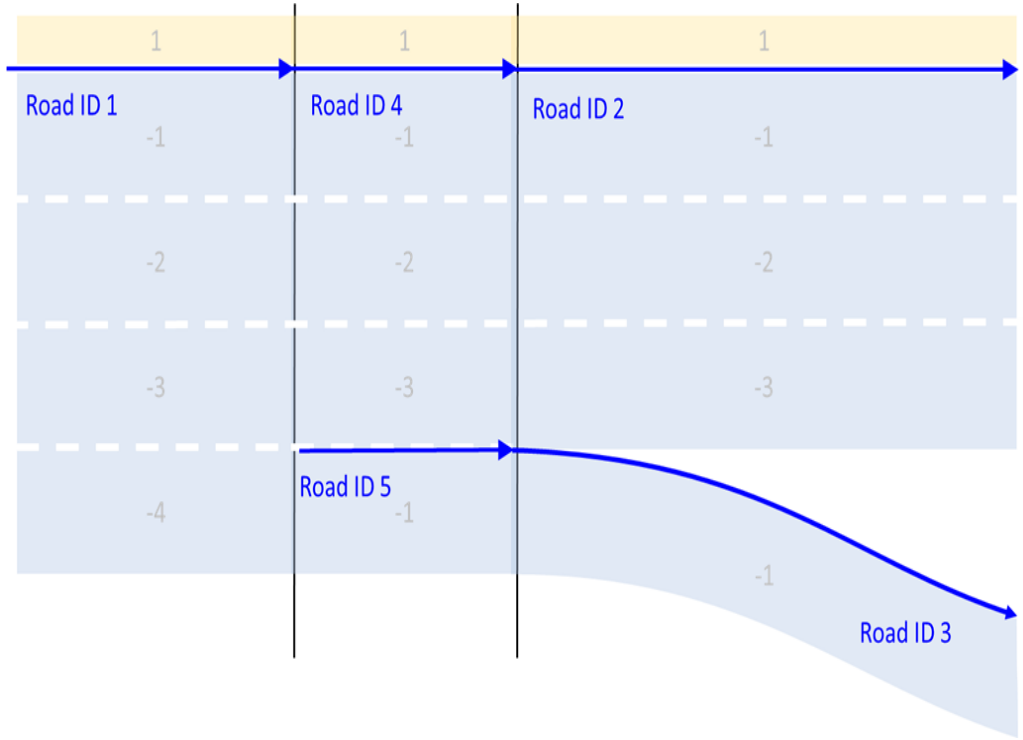
References to other Standards

- XML 1.0 Schema
- UML 2.5.1 Standard
- ISO 3166-2 for country codes
- ISO 8601 for time / date
- Georeferencing (ISO DIN 19111)

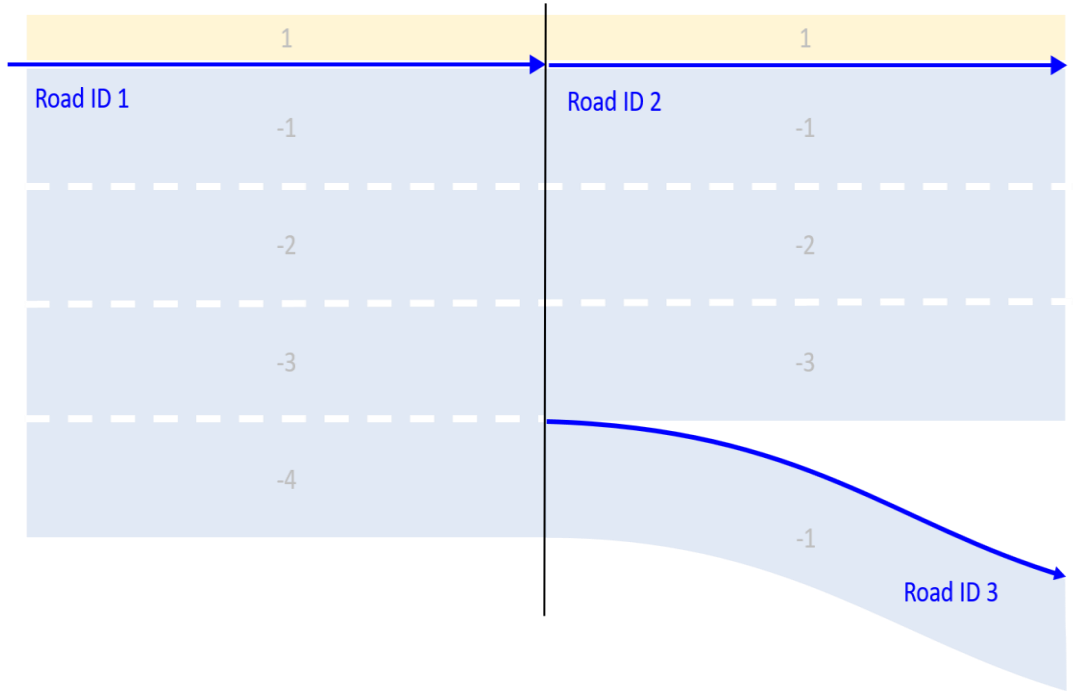
What's new OpenDRIVE 1.7

Direct Junctions

used for a typical motorway exit.



OpenDRIVE 1.6

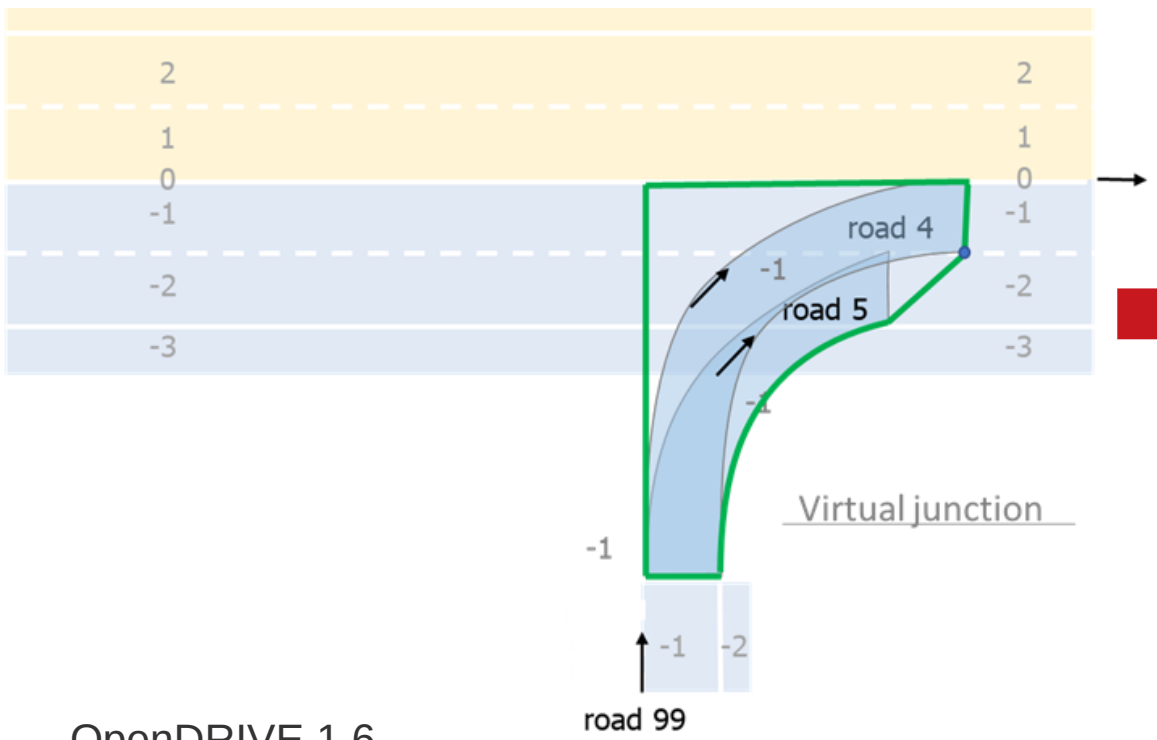


OpenDRIVE 1.7

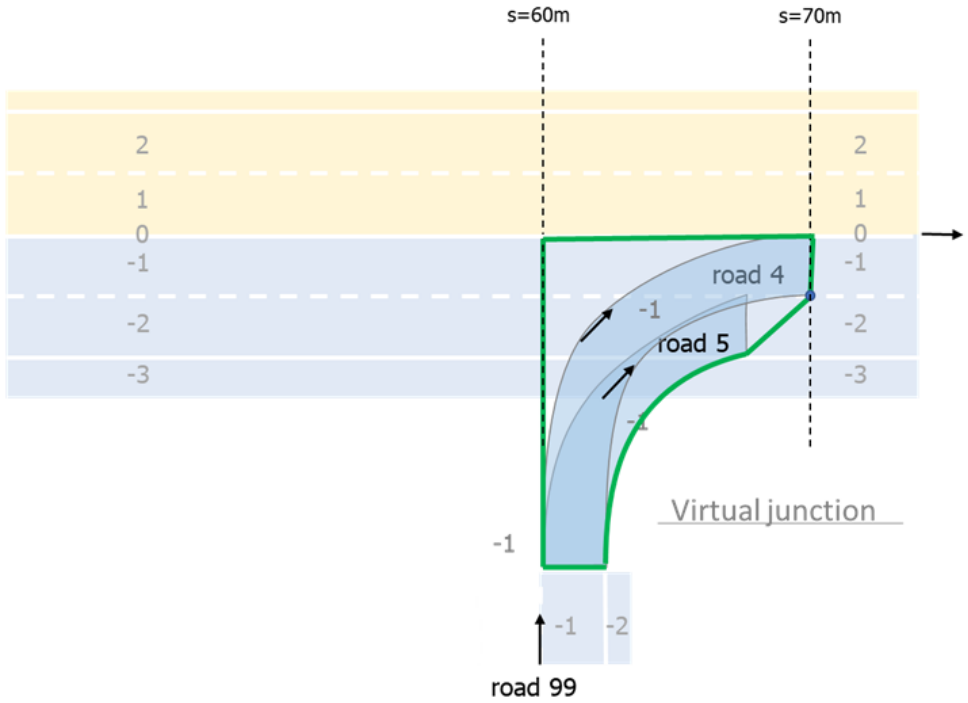
What's new OpenDRIVE 1.7

Virtual Junctions

used for driveways and supermarket entries



OpenDRIVE 1.6



OpenDRIVE 1.7

What's new OpenDRIVE 1.7

OpenCRG for objects

Required for potholes, manholes, cracks patches

In OpenDRIVE 1.6

- Can have either OpenCRG for the road or openCRG for an object. But not both at the same place.
- No linkage between the objects and the openCRG
- Object with openCRG could not be rotated

Or

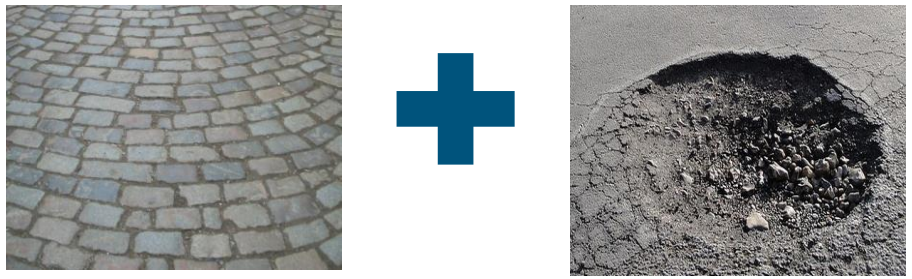
What's new OpenDRIVE 1.7

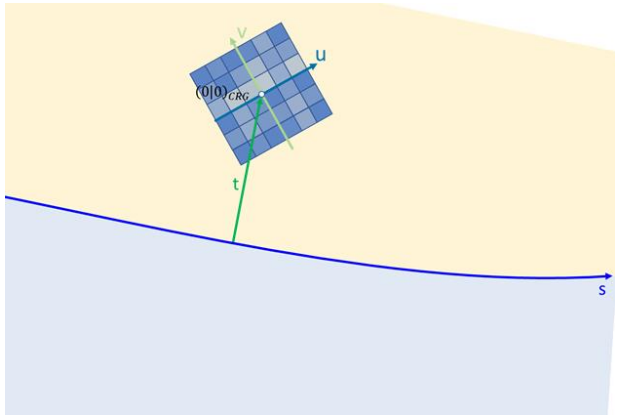
OpenCRG for objects

Required for potholes, manholes, cracks patches

In OpenDRIVE 1.7

- Can have road surface and a pothole at the same place
- It is clear with openCRG belongs to which object
- Object with openCRG can be rotated





What's new OpenDRIVE 1.7

Documentation improvements

From OpenDRIVE 1.5 to OpenDRIVE 1.6

- Added UML Model
- Document was still in Word.
- -> Redundancy of contents. Only parts were extracted from the UML Model and added manually to the document.

From OpenDRIVE 1.6 to OpenDRIVE 1.6.1

- Document was moved to asciidoc, html and gitlab.
- -> Redundancy of contents. Only parts were extracted from the UML Model and added manually to the document. Changes had to maintained twice.

From OpenDRIVE 1.6.1 to OpenDRIVE 1.7

- All classes are extracted automatically into the document.
- A lot of the redundancy has been removed
  - class description
  - attribute description
  - attribute types

Backward Compatibility

- OpenDRIVE 1.7 is backward compatible to OpenDRIVE 1.4 and OpenDRIVE 1.5 OpenDRIVE 1.6.x xml files (not the schema files).

Deliverables

Documents

- OpenDRIVE 1.7 Specification:
  - HTML

Supplementary Files

- xsd schemas
- UML Model as html Export
- Example and use case files
- OpenDRIVE Signal Catalog