

ASAM OpenCRG 1.2

Release Presentation

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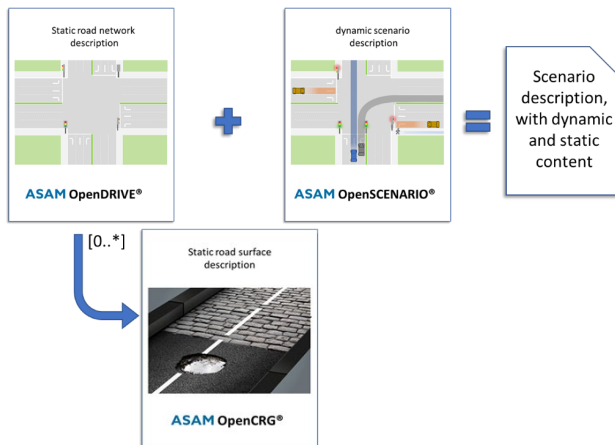
18th Nov. 2020



Agenda

- 1 P2019-05 OpenCRG Transfer and Further Development Project**
- 2 What's new in OpenCRG 1.2**
- 3 Comments on the Requirements and Features from the Project Proposal**
- 4 Deliverables**

P2019-05 OpenCRG Transfer and Further Development Project



- Goal: Transfer OpenCRG 1.1.2 as OpenCRG 1.2 to ASAM
- Add new functionality.
- OpenCRG comprises open file formats specification and open source tools for the detailed description, creation and evaluation of road surfaces.
- As basic functionality OpenCRG describes the geometry of the road surface based on a reference line and a height grid.
- It is intended for vehicle dynamics, tire, vibration and driving simulations.
- OpenCRG is to be understood as a complementary standard to OpenDRIVE. While OpenDRIVE files are describing road networks with respect to all data belonging to the road environment, OpenCRG describes the road surface in detail. OpenDRIVE allows the referencing to OpenCRG files.

What's new OpenCRG 1.2

Document

- The document was given a complete new clear information architecture.
- Terms have been cleaned.
- New illustrations.
- Introduction of a basic set of rules for the individual elements.

Code

- Code Header (C + Matlab) in ASAM Style
- Terms in the function description have been cleaned with respect to the specification.
- New html viewer style based on OpenStreetMap (Matlab)
- Map projection functionality (Matlab)
- Local Curvature Check implemented (C + Matlab)

Example data

- New example files added (for map projection and curvature checks)

Requirements

R001_Harmonize the reference line definition with OpenDRIVE

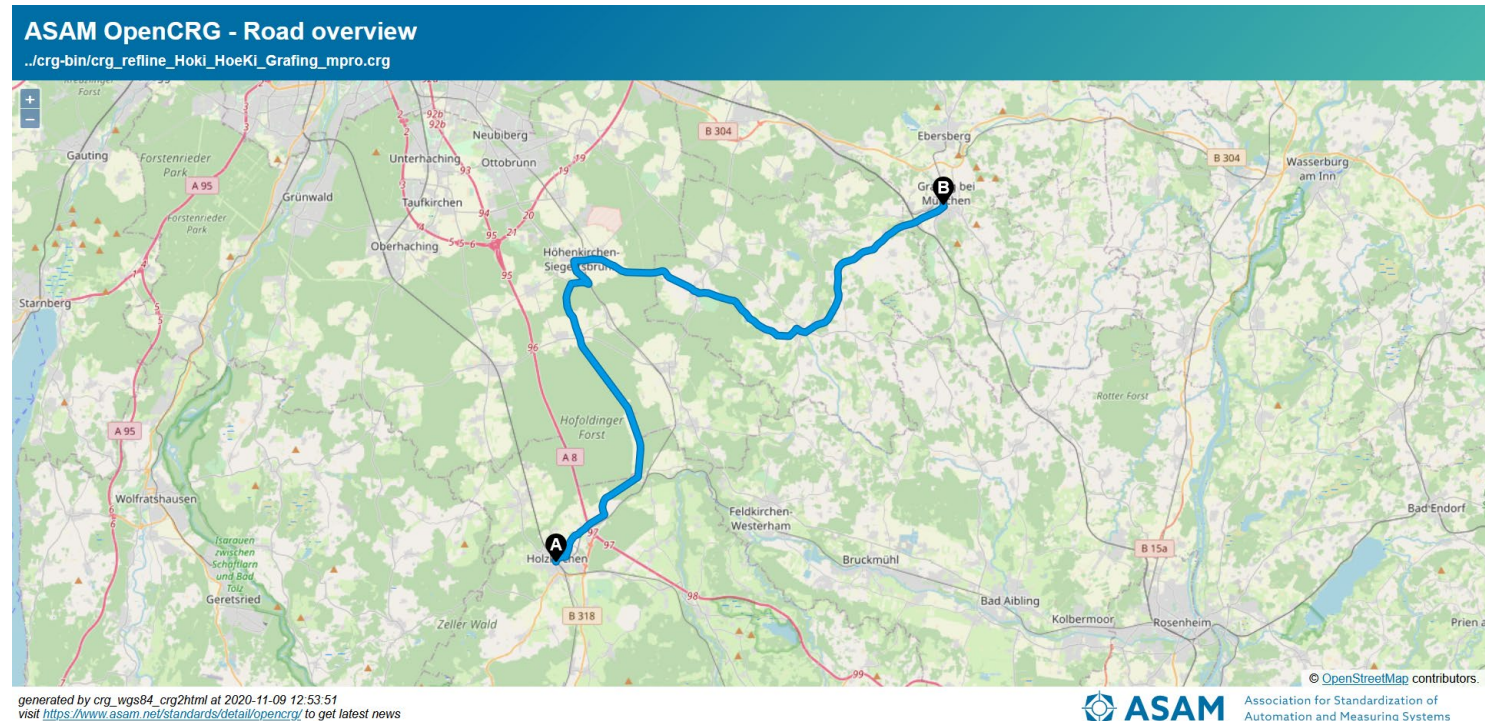
- Harmonization is not possible due to dependencies within the projects.
- Based on a common working group meeting of members from OpenCRG project and OpenDRIVE
- Will be addressed in the OpenDRIVE Maintenance Project.

R002_Allow wide roads with high curvature

- Implemented as local curvature check

R003_Show reference line on maps from multiple map-providers

- OpenStreetMap support implemented



Features

F001_Georeferencing

- Functionality for Georeferencing has been implemented, tested and documented.

F002_MultipleDataLayers

- Concept for integrating multiple data layers was developed and discussed.
- The work load for implementing this feature was far above the budget for service providers as well as the committed working hours of the working group members.
- The developed concept is available for further use in a new, potential project.

F003_SpecialAreas

- Has been discussed in the working group, no justified use-case was found. Feature was dropped.

Deliverables

Documents

- OpenCRG 1.2 Specification:
 - HTML
- User manual elements are integrated in the Specification.

Source Code

- Matlab
- C

Backwards compatibility

- OpenCRG 1.2 is backwards compatible.
- CRG-Files don't have to integrate or use the new functionality

Availability

- Specification and Code will be available on GitLab and on ASAM Homepage after Release.

Thank you ...

... for your attention!

Thanks to all contributors, Nicco Dillmann as well as Virtual City System and Parson for the good collaboration!