ASAM OpenX

AVL

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ASAM
Association for Standardization of
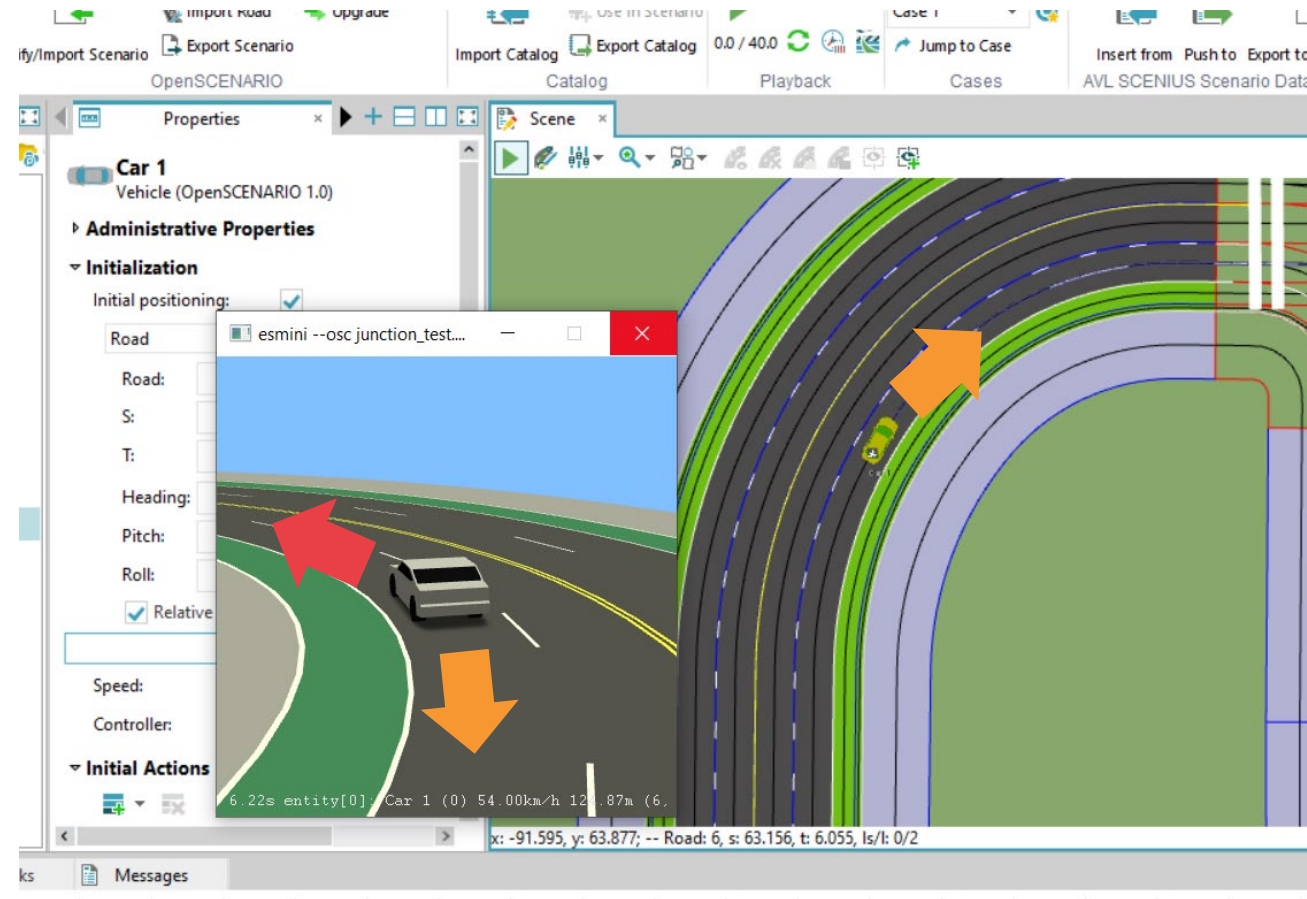Automation and Measuring Systems

ASAM OpenDRIVE

- Topology problems
  - missing or wrong road or lane links
  - Usually in junctions, but not always
  - Geometry often matches, but road navigation is problematic
- Geometry problems
  - Roads correctly linked, but start or end point do not match (or heading)
  - Discontinuity in trace
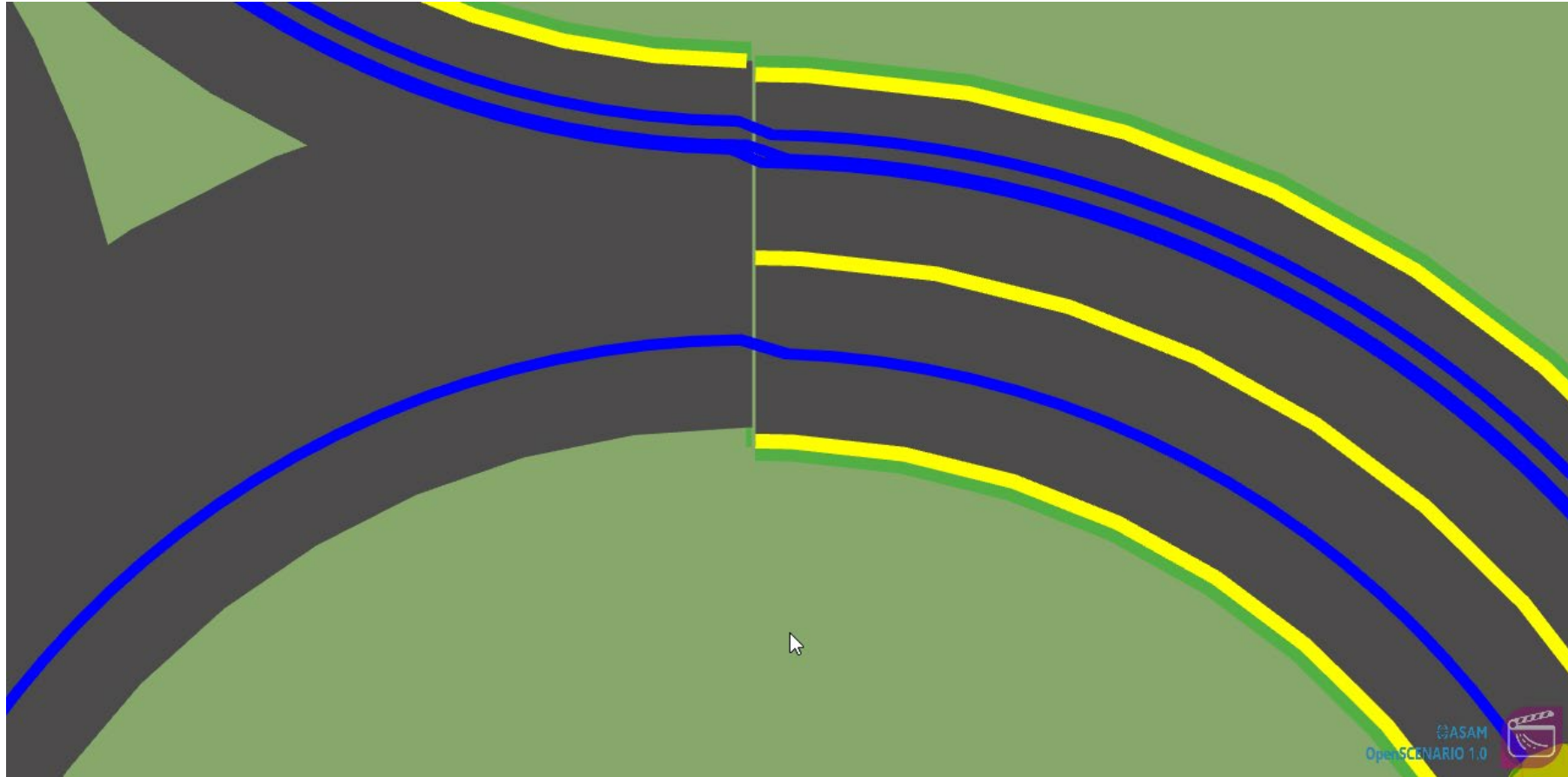 - Lane widths positive in entire interval (polynom definition)

ASAM OpenDRIVE

Default value misinterpretation – driving direction rules

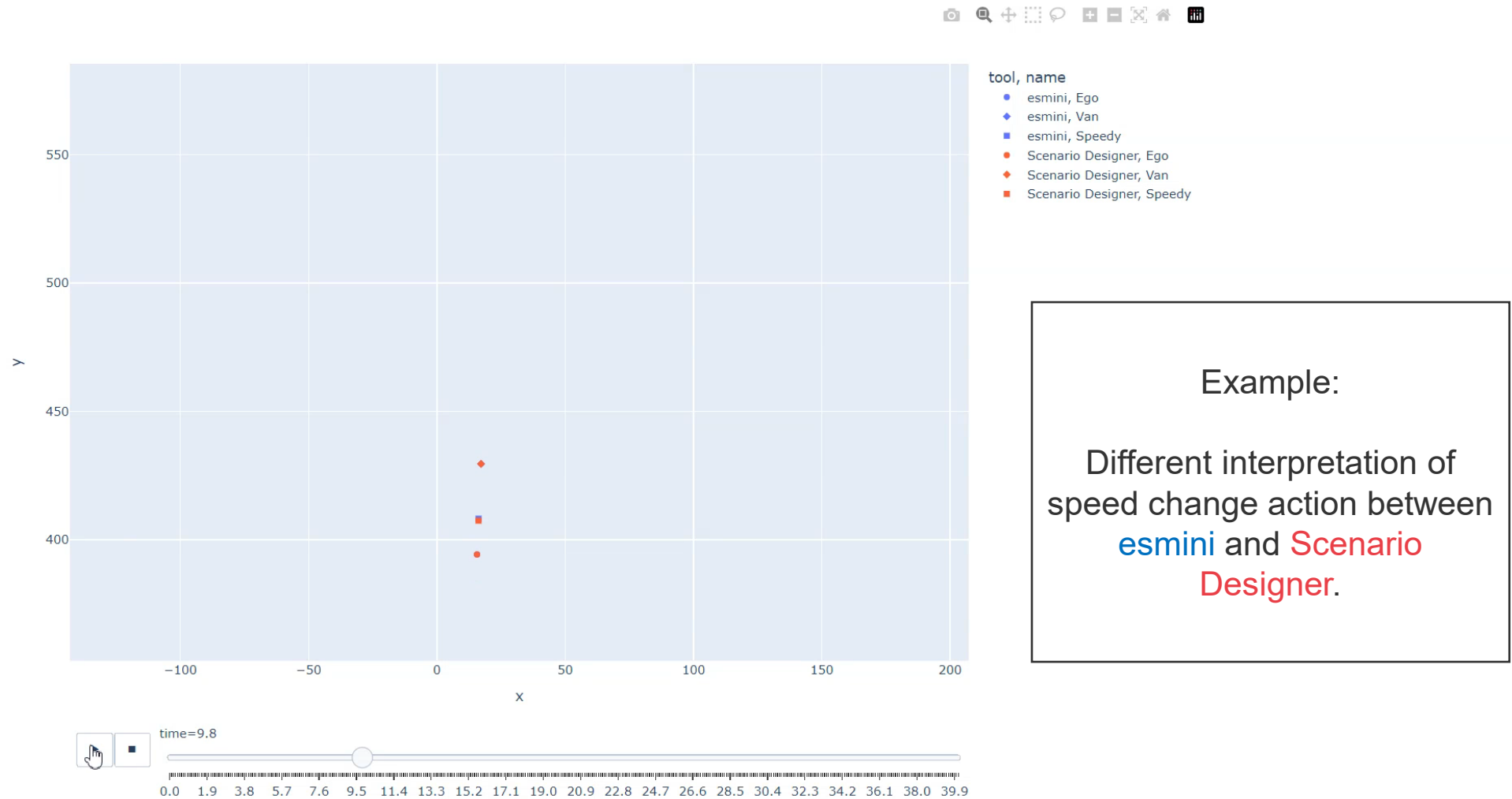# ASAM OpenDRIVE

Geometric discontinuity

ASAM OpenSCENARIO

Problems not detected with XSD schema

- Multiple actions in init or event
  - Same or different type, conflicting

- References
  - Inter/intra file

  - References to entities or to storyboard elements

  - Referenced entity in triggering entities

- Parameter types
  - Wrong type parameter bound to an attribute

  - Wrong type of default value

- Cyclic definitions
  - Relative positioning, relative speed

  - Trafic Signal Controllers

- Traffic Signal States

Understand tool differences in SAM OpenSCENARIO interpretation

Idea: compare trajectories from different tools

tool, name
- esmini, Ego
- esmini, Van
- esmini, Speedy
- Scenario Designer, Ego
- Scenario Designer, Van
- Scenario Designer, Speedy

Example:

Different interpretation of speed change action between esmini and Scenario Designer.

time=9.8

0.0 1.9 3.8 5.7 7.6 9.5 11.4 13.3 15.2 17.1 19.0 20.9 22.8 24.7 26.6 28.5 30.4 32.3 34.2 36.1 38.0 39.9

What if there was an official free OpenX checker tool?

- What if there was an official free checker tool to see
  - if a .xosc file is valid
  - in which tools it can be correctly interpreted (based on support of the used features)?
- AVL is planning to launch a free OpenSCENARIO 1.0 Online Validator
  - Free online service with focus on file validation and not tool compatibility
- An official tool from ASAM would be very appreciated
- It could be open-source in ASAM repository with free download of compiled release versions
- Potential topic for an ASAM subcontractor?