

PROVING GROUND – GENERIC AND DATA FLOW



Generic Approach for Proving Ground Tests – Implementation of a Test Case for Proving Grounds

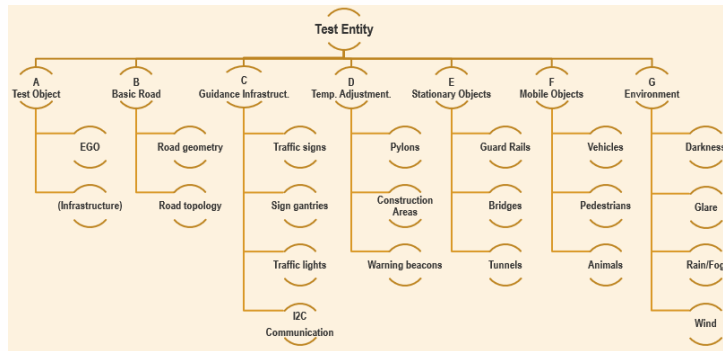
The concrete scenario consists of various test entities:

A. Test object – in PEGASUS Vehicle Under Test (VUT-EGO vehicle), but could, for example, be the active street markings (i.e. infrastructure).

B. Basic road – fixed road parameters like road geometry and road topology (cross section including traffic lanes and their width, markings etc.).

C. Guidance infrastructure
Active/Passive – Passive and active traffic signs, traffic lights, which are permanently installed in the basic route

D. Temporary adjustments – the basic road is augmented with bottlenecks or road works to generate suitable scenarios



E. Stationary entities – all structural components and all other permanently installed entities associated with the road e.g., Guardrails, bridge etc.

F. Mobile entities – all entities which can move. A vehicle with zero speed is a static mobile entity, with non-zero speed a dynamic mobile entity.

G. Environment – the environmental conditions.



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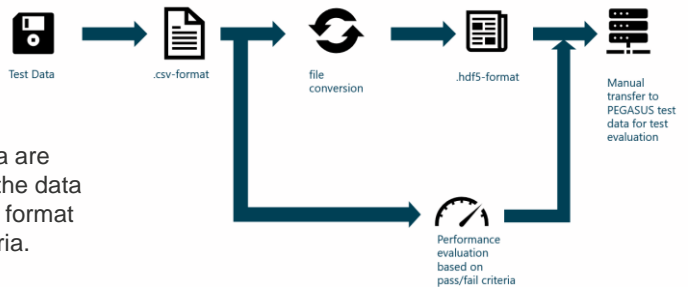
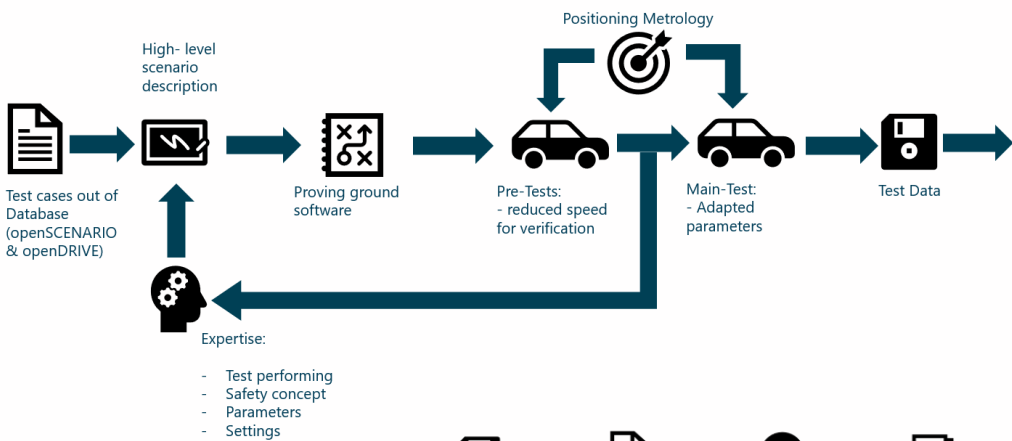
on the basis of a decision
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Workflow Database to Proving Ground

- After receiving the test case, a high-level description of the scenario to be driven is created with the help of expert knowledge.
- Using suitable software, this description is then converted into an automatically executable scenario.
- The safety drivers, who are part of the safety concept, carry out the first preliminary tests at reduced speed.
- After a few iterations and adjustments of automation parameters, the main test is performed several times.
- The generated measurement data are used to evaluate the VUT with regard to pass/fail criteria and the measured data are made available to the PEGASUS database. The first part of the tool chain, which is shown in the figure below, shows the test preparation up to the main test with the generated data.



- After the test has been carried out, the data are processed further. The data generated by the data recorder is converted to the PEGASUS file format and evaluated with regard to pass/fail criteria.



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