

openPASS Glossary

1 General

Term	Definition
Active safety Systems	Active safety systems are, within the context of the tool, systems that have notable safety effect on the course of simulated situations.
ADAS	Advanced Driver Assistance System
PCM of GIDAS	PreCrash Matrix from the database of the German In-Depth Accident Study

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2.1 Framework-Architecture

Term	Definition
Core	Consists of a master-slave system and provides the main functionality of the framework, like creating agents, scheduling tasks and coordinating the flow of information.
Core Module	<p>A module that provides a main function to the core, like a detection of collisions or some stochastic equations. These modules are not part of the core, but part of the framework itself.</p> <p>They're exchangeable, so that some functionality can be implemented differently.</p>
Framework	<p>A software environment which provides the functionality to simulate a set of different traffic scenarios.</p> <p>Consists of the Core and the Core Modules.</p>
OpenPass	Framework for the simulative evaluation of active safety systems in vehicles.
OpenPassMaster	Coordinator of the simulation process. It starts one slave for each scenario.
OpenPassSlave	Simulator. It runs one scenario with a defined number of similar situations.

2.2 Agents

Term	Definition
Agent	An arbitrary static or dynamic object in the simulation of a traffic situation. Therefore, it might (but does not have to) be a traffic participant. An agent consists of one Agent Equipment and its physical parameters.
Agent Equipment	A set of components determining an agent's behavior.
Component	A module that defines a specific part of an agent's behavior, like sensing the environment (Sensor) or calculating a desired acceleration (Algorithm).
Signal	A general term that subsumes inputs and outputs. Signals are transported by channels within an agent's equipment.

1.1 Simulation Elements

Term	Definition
Configuration	A file used to specify the framework parameters, the behavior of the agents or to describe traffic scenarios.
End condition	A condition that determines whether the simulation of a situation has to be continued or has to be terminated.
Interface	Establishes a communication between modules.
Module	A dynamic library that is loaded and whose interface functions are called by the framework. Modules can be components or provide other individual functionality necessary for the simulation. Modules are exchangeable and can be fitted to various purposes ensuring a high flexibility of the framework.
Traffic scenario	A set of similar traffic situations.
Traffic situation	A unique variation of a traffic scenario that is described unambiguously by its spatial (e.g. road network), temporal (time, date, duration) as well as participant set up.
Trajectory	A data structure containing the information of an agent's location at different times within a finite timespan