

PELAB: Simulation and Visualization

The heart of the simulation is the Dynamic Scene Simulator (DSS). The reasoning system communicate hardware-level sensor and actuator commands to the DSS. The DSS is CPU intensive and is designed to run on a separate computer, using TCP network connections to communicate with other parts of the system.

Integrated simulation of control hardware and vehicle dynamics is implemented using Modelica, a powerful object-oriented modeling language. Modelica compiles into differential-algebraic equations (DAEs) which are then solved numerically.

