

Alternative Vehicles Library

Hybrid Vehicle Power Trains, Battery-Electric and Fuel-Cell Vehicles

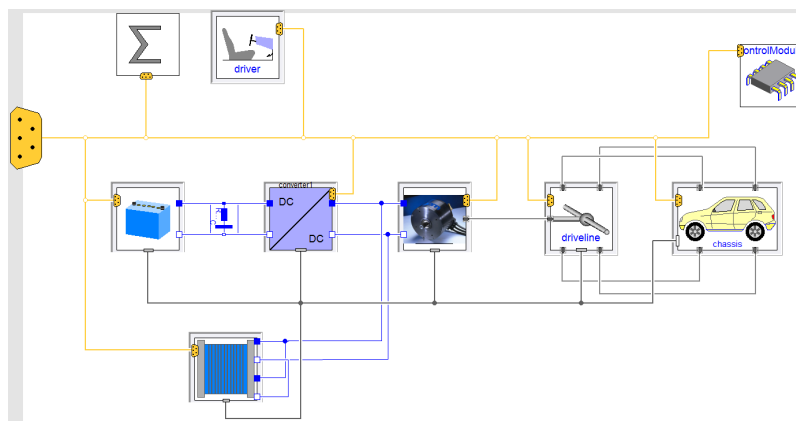
AlternativeVehicles Modelica Library

developed by DLR
distributed by BAUSCH-GALL GmbH

The AlternativeVehicles Library provides one-dimensional mechanical and electrical components for alternative power trains. It contains ready-to-use vehicle architectures including battery-electric vehicles, range-extender vehicles and fuel-cell vehicles and component models for electric drives, energy storages, fuel cells, engines, drivers and drive cycles.



The focus of this library is on modeling of alternative power trains with emphasis on fast and simple parameterization of component models by using commonly available manufacturer datasheets and / or measured data.



- AlternativeVehiclesExt
- MapDir
- Users Guide
- Examples
- VehicleArchitectures
 - BatteryVehicle
 - ConventionalVehicle
 - RangeExtender
 - FuelCellVehicle_01
- BaseClasses
 - FuelCellVehicleWithCo...
 - FuelCellVehicle_02
- Chassis
- DriverEnvironments
- ElectricDrives
- EnergyStorages
 - Batteries
 - UltraCapacitors
 - Flywheels
- Engines
- Transmissions
- Converter
- Roads
- Controllers
- Accessories
- Data
- Icons
- Inspectors
- Interfaces
- Types
- Utilities
- Drivelines
- CoolingCycle
- FuelCells

New in version 1.1:

- Examples for parallel-hybrid vehicle MB S400H and conventional vehicle MB S350
- Test benches for batteries, combustion engines, transmissions and electrical drives
- Improved tutorial and documentation

The AlternativeVehicles Library was developed within the European research project EUROSYSLIB. The models are based on the VehicleInterfaces library ensuring compatibility to already existing automotive libraries.

Development

DLR, German Aerospace Center, Institute of Vehicle Concepts, Stuttgart, Germany (www.dlr.de/fk) with contributions of Institute of Robotics and Mechatronics, Oberpfaffenhofen, Germany.

Availability

Version 1.1 is available for Dymola

Tested on Dymola 2013 and Modelica Standard Library 3.2



DLR