Integrated simulation process
in ModelDesk

Straight Through from MIL to HIL

Up to now, ModelDesk has mainly been used as the central parameterization software for the Automotive Simulation Models. Now it's taking on an additional role in the development process: simulation management based on its integrated plotter and simulation management feature. ModelDesk can be used seamlessly from parameterization to offline and online simulation, right up to parameter and result management.
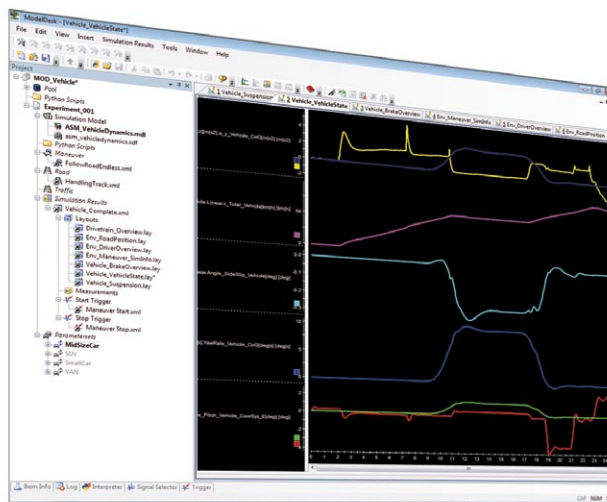
Simulation Models with Graphical Front End

The Automotive Simulation Models (ASMs) are MATLAB®/Simulink® models for simulating essential automotive components and properties. They include combustion engines, electric motors, vehicle dynamics, electrical systems, and traffic for passenger vehicles as well as commercial vehicles. The models are open down to Simulink block level. You can view the modeled functions and modify them any way you want. ModelDesk is the graphical front end for calibration and parameterization.

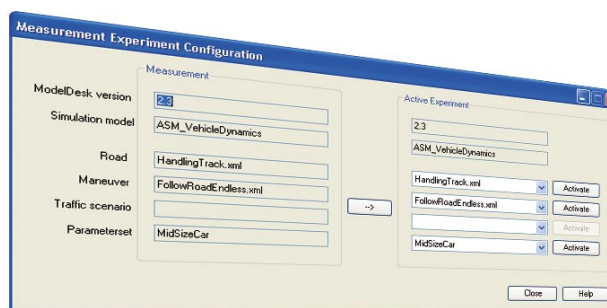*ModelDesk's new plotter displaying various vehicle dynamics signals.*

Profile of ModelDesk 2.3

Central user interface for offline and online simulations

- Integrated simulation control
- Plotters
- Simulation data management

Configuration of a simulation experiment consisting of a vehicle model, road, maneuver and vehicle parameters.

▍ Consistent workflow for offline and online simulations

New Simulation Management
The new version of ModelDesk includes powerful functions for directly executing and displaying simulations, and managing their results:

- Starting and stopping a simulation
- Plotters for visualization
- Saving, comparing and managing simulation and measurement data
- Saving simulation experiments (driving maneuvers, roads, traffic, etc.)

To help you use new functions efficiently from the word go, there are ready-made plotters that provide

the signals of individual models – giving you direct access to important vehicle dynamics characteristics. You also have complete freedom to display further stimulus signals, for example, via additional plotters. Signals can be selected quickly and easily with the well-organized structure of the ASM signal bus.

Many Tasks – One Tool
With its integrated simulation functions, ModelDesk is the main user interface, bringing together all the tasks that are essential before, during, and after simulation. ModelDesk is equally well suited to model-in-the-loop (MIL) simulations

or Simulink simulations (offline) and hardware-in-the-loop (HIL) simulations (online), so it supports an integrated process from function development to ECU testing. During simulation experiments, ModelDesk stores parameters such as roads, driving maneuvers, traffic, and vehicle configurations together with the simulation results and any measurement data to ensure that simulations are easy to reproduce. Offline and online simulations can also be compared just as easily. ■