





# Dymola 7.4 FD01

## Main Highlights

18 March 2011



# Dymola 7.4 FD01 main highlights

-  Support for Modelica 3.2 and MSL 3.2
-  Improved development environment
  - Improved checking, especially of arrays and records
  - Improved trace of equations in exported C code
-  Continued work on Functional Mock-up Interface
-  Miscellaneous
  - Support for Visual Studio 2010
  - Improved simulator with DDE communication

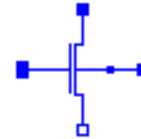
# Modelica 3.2

## Support for Modelica 3.2 specification

- Operator overloading (e.g. + on complex numbers)
- Functions as arguments to functions
- Homotopy operator (improved initialization of fluid systems)

## Modelica Standard Library 3.2

- Complex math, complex blocks
- Quasi-stationary electrical, SPICE3 models
- Fluid dissipation
- New: 357 models and blocks, 295 functions, 7 packages





# Improved libraries(1)



## Air Conditioning Library

- Support for engine cooling applications
- Improved performance for detailed heat exchanger models
- R1234yf is now part of the standard distribution
  - New, more accurate, equation of state
- Modelica 3.2 streams concept used in connectors



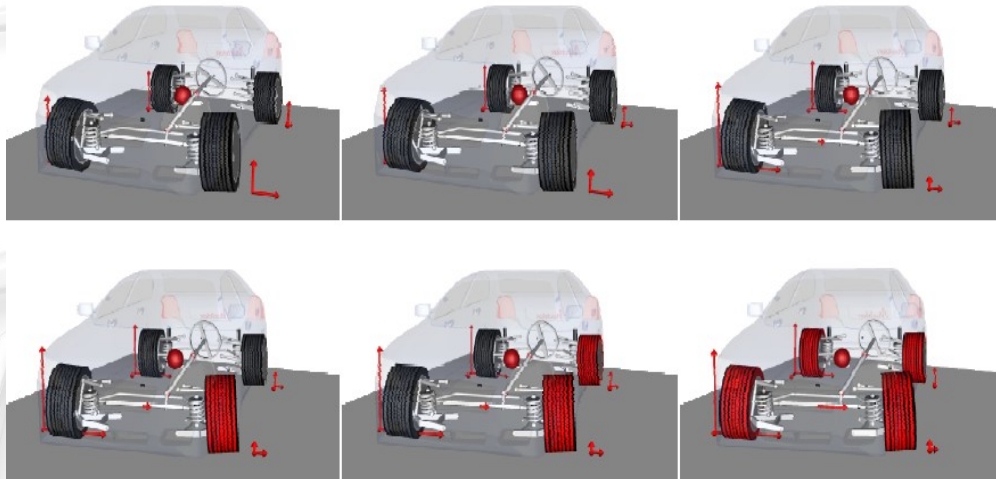
## Hydraulics Library

- Models for accumulators, accurate model for high pressure Nitrogen
- Possibility to use appropriate fluids from Modelica.Media
- Several new directional control valves

# Improved libraries (2)

## Vehicle Dynamics Library

- Enhanced support for steady state and quasi steady state driving situations, e.g. cornering, corner entry and exit, and braking



- Improved table based suspensions; coupling effects between bump/steer
- Improved configurability of suspensions