

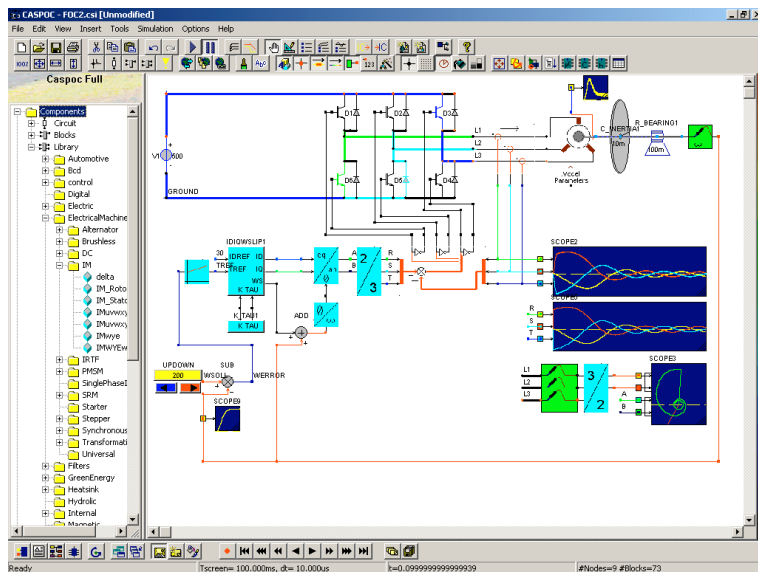
Caspoc

Fast and Easy Power Electronics and Electrical Drives Simulation

Motion Control and Variable Speed Drives

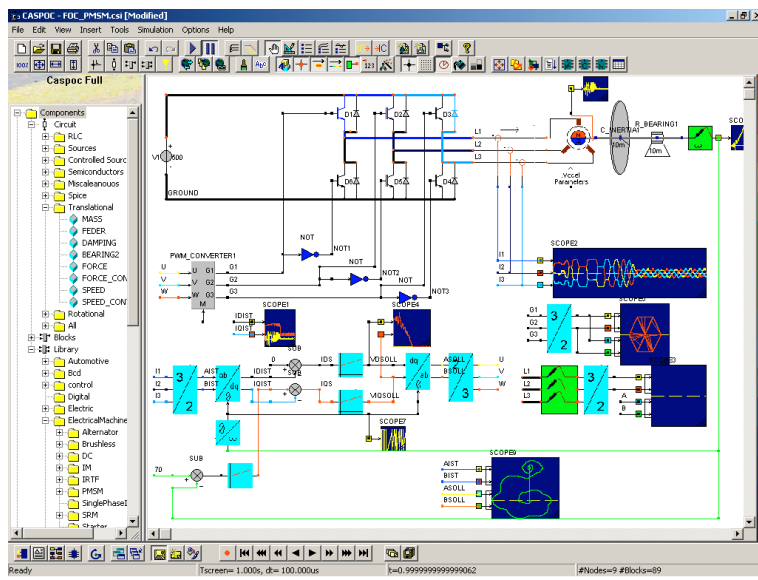
Analysis and design of a motor drive system becomes easy when using Caspoc. Modeling electrical machines and variable speed drives is included in the standard and professional version of Caspoc. It provides an easy and effective way of modeling and simulating motor drive systems.

Simply connecting the electrical machine to the power electronics and the mechanical shaft builds your drive system fast and efficient.



The power electronics, control loop, electrical machine and mechanical drive are modeled in one schematic. All basic types of machines and mechanical components are available.

Connected to the comprehensive control library components, such as PI-controllers, Field Oriented Control, etc., an electrical drive is built quick and convenient. Using modeling language such as C/C++, you can even create custom-built machine/load models.



Features:

- Applying ready to use components, such as abc-dq transformations, PI-controllers and digital / analog filters, any drive system is modeled very easy and the system layout is clearly visible.
- Many samples are available, for example, Field Oriented Control as shown here. The vector drive with induction machine (top) or Field Oriented PMSM drive are straightforward to implement.
- The Simulink coupling can be used to couple your Power Electronics and Electrical Drive to any Simulink control model if required.
- Co-Simulation and data exchange with famous FEM software gives you the power to any new type of electrical machine.

Electrical Machines:

- Permanent magnet synchronous machine
- Induction machine (squirrel cage, wound rotor and single-phase)
- Synchronous machines and generators, permanent magnet and externally excited
- Permanent magnet DC machines
- Brushless DC machines
- Series shunt and compound DC machines
- Switched reluctance machines
- Synchronous reluctance machines
- Stepper motors
- Automotive alternators (DC & 3 phase)

Mechanical components:

- Shafts, masses, spring, bearings, gearboxes, differential gear, planetary gear
- Constant torque, constant power and general type mechanical load
- Speed, torque and power sensors

Summarizing, any type of electrical machine can be modeled quick and easy.