

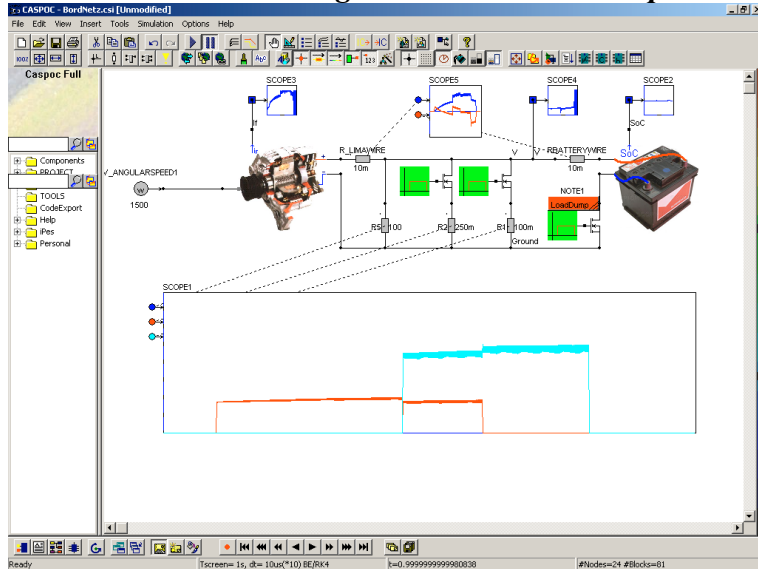
# Caspoc

Fast and Easy Power Electronics and Electrical Drives Simulation

## Automotive Power Management

Automotive Power Management optimized and tested for various load applications. Model the entire power grid with all users. Observe battery charging and discharging and harmonics caused by the alternator. Create a load-dump and simulate the stability of your power grid.

### Automotive Power Management with Load-Dump



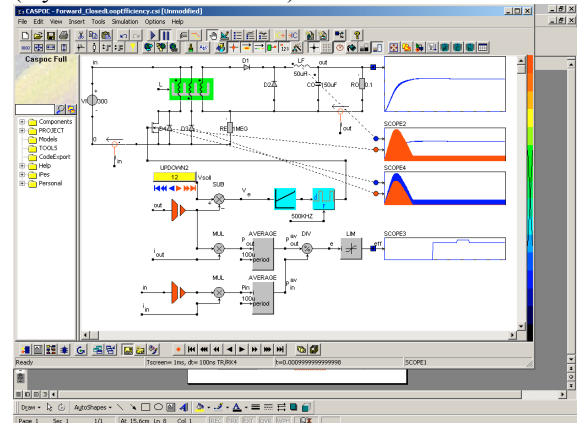
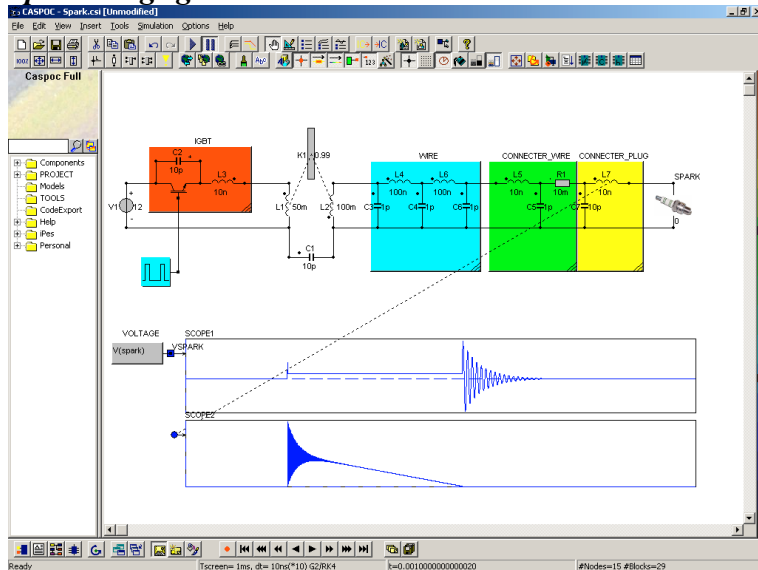
### Features:

- Detailed Alternator model including 6 pulse rectifier and controller
- Battery model with SOC, and charge/discharge impedance.
- High-voltage spark plug model
- Bi-directional DC supplies with current limiting and efficiency modeled
- Drive cycles for Power Management

### Bi-directional DC Converter

Power Electronics are emerging in automotive applications. They are not only controlling the engine, alternator and blinker, but nearly all devices like motors and other automotive actuators are controlled by power electronics. A Bi-directional converter is modeled in detail for the conversion between the battery voltage and the higher bus voltage in HEC (Hybrid Electric Vehicles).

### Spark Plug Ignition with IGBT control



*Summarizing,  
Automotive Power Management  
Engine-Management  
quick and easy.*