

Controls Concept for an Electric Motor using a Speedgoat Real-Time Target Machine



Project Characteristics

Modeling:	★★★★★
Mathematics:	★☆☆☆☆
Programming:	★★☆☆☆
Science:	★★★☆☆

Setting:

Design, test and validate motor control algorithms for electric motors using Simulink® and Speedgoat hardware. The Speedgoat motor control kit [1] enables you to control a brushless DC motor using field-oriented control (FOC), tune parameters on-the-fly, and estimate motor parameters.

Your Tasks:

- Ramp-up on Simulink and Simulink Real-Time™
- Familiarize with Speedgoat hardware, the motor control kit and the real-time workflow
- Set up an RCP workflow via Ethernet, CAN-FD and FlexRay communication protocols
- Develop controls using different control approaches, e.g. different levels of complexity and with and without position sensing