PLECS WORKSHOP

Real-Time Simulation Using the PLECS RT Box
Plexim GmbH, May 4, 2017

08:30	Registration and Installation of Necessary Features
09:00	Overview and Introduction to RT Box Workflow using PLECS ▶I PLECS overview ▶I Ideal switch concept ▶I From PLECS offline models to RCP and HIL ▶I Code Generation
09:30	RT Box Introductory Exercise ▶I PLECS RT Box features Exercise: Introductory exercise using I/O ports
10:00	RT Box Specs and Library Blocks
10:15	Break
10:30	Real-time Simulation of a Voltage Source Inverter (VSI) ▶I PLECS model creation using the target blocks library ▶I Deployment on the RT Box Exercise: Voltage Source Inverter (VSI)
12:00	Lunch
13:00	Timing Overview and Step Size Selection ▶I Example of a Buck Converter using continuous, switched implementation ▶I Step size and calculation time ▶I Motivation for sub-cycle averaging using PWM capture module ▶I Example of a Buck Converter with sub-cycle averaged configuration
13:45	Model Optimization ▶I Sub-cycle averaging and power modules ▶I Model separation Exercise: Model splitting using a DTC example
15:00	Break
15:15	Virtual Prototyping ▶I Concept of virtual prototyping ▶I Extension of VSI with controls Exercise: Virtual prototyping
16:00	Q&A - End of Workshop
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Location	Plexim GmbH, 3rd Floor, Zeppelin Wing, Technoparkstrasse 1, 8005 Zurich, Switzerland
Note	This workshop addresses to anyone who already has experience with the simulation software PLECS.