CANoe .LIN Fundamentals

Agenda VectorAcademy

Delivery Format:	This course is offered in Classroom or in Remote Format
Duration:	Classroom: 2 days Remote: 12 hours
Target Group:	LIN users
Prerequisites:	E-Learning LIN (https://elearning.vector.com/mod/page/view.php?id=309)
Goal:	Measuring, analyzing as well as stimulating a LIN environment with help of CANoe. Remaining bus simulation, stressing and analyzing with CAPL programs

1. Fundamentals of the LIN Protocol

- LIN network architecture, communication principal
- Synchronization, securing data
- LIN frame, frame transmission, frame types
- Frame slots, scheduling
- Network and status management

2. LIN Network Description and Introduction to CANoe .LIN

- LIN Description Language
- LIN Description File (LDF) : LIN nodes, frames/commands, signals, schedules
- Operation concept, measurement and simulation setups in CANoe.

3. Measurement and Analysis

- Configuration of windows and function blocks
- Trace, signal analysis in graphics windows

4. Sending and Simulation

- Network Node
- LIN Interactive Scheduler

5. Panels and Signal Generators

- Changing signals with panels via interaction layer
- Signal access with signal generators

6. Introduction to Programming Language CAPL

- System and Environment Variables
- System- and LIN-specific procedures > Elementary event procedures
- Data types, typical CAPL keywords

7. LIN cluster Simulation with CAPL

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- Simulation of slave tasks
- Simulation of a master task, scheduling of Unconditional, Diagnostic, Event Triggered and Sporadic Frames
- Network management

8. LIN Analysis and LN Stress Feature Set

- Analysis functions supplementing analysis windows of CANoe
- Simulation of errors, manipulation of the bandwidth, simulating short circuits