

TRAINING

Bei dem hier beschriebenen Training handelt es sich um ein Cadence Standard Training. Sie erhalten eine Dokumentation in englischer Sprache. Die Trainingssprache ist deutsch, falls nicht anders angekündigt.

Unter <http://www.FlowCAD.de/TrainingKontakt.php> können Sie sich zum Training anmelden.

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| Course Title | SIG4-Allegro Sigrity System Serial Link Analysis |
| Course Category | System Interconnect Design – Allegro & OrCAD |
| Duration | 1 Day |

“Good combination of lessons and labs. Feedback of first training was implemented into second training (Valeo side as well as Cadence side.) This is very good! Thank you very much! The content is well prepared. Balance between theory and lab is well chosen. It’s great to have such good trainer who supports also with explanation from reality. He already improved learning experience by more intense support of participant. Very good. Environment was already improved. Everything went quite smooth.” (Gerd Hammer, Valeo, June 2016)

Course Description

Participants in this class will utilize the latest simulation and modeling techniques available for the design and analysis of serial data channels. A basic channel with default models are used for the first simulation to so the 2D and 3D eye diagrams and bathtub curves that are produced. Next the participants will modify the analysis options to control the bit rate of the channel and inject distortion and jitter into the channel. IBIS-AMI models will then be discussed and the users will adjust AMI parameters and use a vendor based IBIS-AMI model in the simulation. A pre-route scenario will then be investigated with the TLine Editor being used to create transmission line models and the Via Wizard used to create via models. Finally a post-route scenario will be covered and PowerSI will be used to extract an SParameter model from the routed interconnect of a PCB Editor board database.

Learning Objectives

After completing this course, you will be able to:

- Define a basic serial link in SystemSI and simulate it using channel analysis techniques
- Modify the simulation parameters such that the effects of jitter, noise, and data pattern are included in the simulation results
- Include the effects of crosstalk in a channel simulation
- Include IBIS-AMI algorithmic models and adjust their parameters during simulation
- View waveforms, eye diagrams, and bathtub curves
- Use SystemSI in a design setting, sweeping variables for solution space exploration
- Use the TLine Editor to create transmission line models
- Use the Via Wizard to create via models
- Use PowerSI to extract SParameter models from routing in a PCB Editor board file

Software Used in this Course

- AllegroSigrity System Serial Link SI Suite – or –
- Allegro Sigrity System Serial Link Option

Course Agenda

- About This Course
- Introduction to Channel Simulation
- Stimulus and Analysis Options
- IBIS-AMI Models
- Pre-Route Analysis
- Post-Route Analysis

Audience

- Signal Integrity Engineers
- Electrical Engineers with Signal Integrity knowledge
- PCB Designers with Signal Integrity knowledge

Prerequisites

You must have

- A familiarity with digital and analog circuit design methodology
- A working knowledge of PCB signal analysis and transmission line theory
- A functional vocabulary associated with serial link simulation
- An understanding of the concepts associated with Impulse Response and convolved bit stream simulation

Related Course:

[SIG1AllegroSigritySIFoundations.pdf](#)