

SE-COSIM-01
Co-Simulation of SysML and Simulink – 2 Days
Agenda

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Last update: **August 20**

- Learn FMI, FMU
- Learn how to use this standard in practice to co-simulate SysML and Simulink models.
- Case study for practice
 - UAV for agriculture as System of Interest
 - Initial requirements from DOORS or Excel
 - Practical exercises on case study
 - Co-simulation with SysML and Simulink tools



- Competencies to acquire
 - C1: Learn the principles of the FMI standard and practice it
 - C2: Learn how to co-simulate a SysML model with a Simulink model exported as FMU
- Target public
 - Systems Engineers, Designers and V&V engineers who want to connect SysML models with Simulink models
- Prerequisites
 - Knowledge of Simulink and of SysML languages.



Introduction

- Quick presentation of attendees and trainer
- Quick recall on Simulink

Overview of the Case study

- Presentation of the SysML model after architecture definition
- Needs for the flight management subsystem

Control with Simulink

- Discussions on performance
- Different architectures and designs
- Refinement of requirements
- Feedback to SysML



Recall Day 1

FMI overview

- Principles
- Practical exercises with Simulink tool and FMI

FMU

- Export of model as FMU

Co-simulation of case study

- Configuration for the co-simulation
- Import of FMU in SysML
- Run of co-simulation

Conclusion on the approach

