



Training

A3.Sys2 - Exploiting Domain-Specific Languages (DSL)

Keyfacts

Duration

3 days

Language

English or German

Setting

On-site or remote

Target Group

System Architects, System Designer, and everyone who wants to make his models accessible for everyone in the team!

Training Goals

The ultimate goal of this training is to learn how to make modelling more accessible for everyone in the team by tailoring models to the individual needs. The particular learning goals of this training are:

#1 - Fundamental Concepts of Domain-Specific Languages (DSLs)

Participants understand the fundamental concepts of Domain Specific Languages and how integrate them into their Model Based Systems Engineering Approach

#2 - Language Analysis and Specification

Participants know how to formalize informally spoken languages in an organization into a formal language specification as basis for their individual DSL

#3 - Language Implementation

Participants are able to specify a metamodel for their individual DSL and how to implement it as UML/SysML Profile



Training Content	<p>Foundations of Languages</p> <ul style="list-style-type: none">• Fundamental terms and concepts• Textual vs. Graphical languages• Horizontal vs. Vertical DSLs <p>Language Development: the fundamental process</p> <ul style="list-style-type: none">• Understanding the spoken word• Specification / Implementation / Validation of Language Concepts <p>Language Specification</p> <ul style="list-style-type: none">• Abstract Syntax Model / Concrete Syntax Model / Semantic Model <p>Implementing your own language</p> <ul style="list-style-type: none">• The UML/SysML Profile Mechanism• Implementing your first DSL <p>Extended Concepts</p> <ul style="list-style-type: none">• Tool-Specific Extensions• Diagrams, Toolboxes, Graphical Notations <p>Exploiting DSLs</p> <ul style="list-style-type: none">• How to get the most out of your individual language?• Outlook: SysML V2 - getting everyone on board
Learning Methods and Didactics	Theory Inputs and practical hands-on modelling exercises to develop your first Domain-Specific Language!

Your Benefit

Everyone is aware of the challenges introduced by document-centric approaches. However, the entry barrier into the world of Model Based Systems Engineering is high. A major enabler is the application of "Domain-Specific Systems Engineering" which follows the philosophy that not all Stakeholders need to learn a certain language, but modelling can be done in the lingua franca of a particular organization.

This training will help you make the top-level of your models look like the Powerpoint presentations created by your product manager ;-)

Your Trainer

FH-Prof. Dr. Christian Neureiter
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Christian is Professor at the School of Information Technology and Digitalisation at Salzburg University of Applied Sciences. As head of the "Center for Dependable Systems Engineering" he is an expert in this field and has profound knowledge on the matter.

Asides his academic role, Christian has 10+ years of experience as consultant and trainer

at the Successfactory Consulting group with a particular focus on Leadership, Software, and Systems Engineering related topics.