

# Variability and Complexity Management in the Model-based Development of Software Product Lines

## Content

Within model-based development of software product lines negative variability is a frequently followed approach in practice, i.e. one applies one single implementation model (e.g. in Matlab/Simulink) to implement all features of the product line. When a concrete variant is derived from this model it is cut in a way such that only these features which are relevant for this concrete variant remain in the model and the whole rest is cut off. A drawback of this approach is that the product line models become greater and greater so that they cannot be managed by the engineer any more. Changes of requirements or new features become more and more complicated to realise.

In the context of the current cooperation with the Daimler AG we develop approaches to manage these models. We do not only consider the implementation model but also integrate requirements and tests as well as the relationships between them.

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