all you need for product lines

pure::variants for

MATLAB® Simulink®

Variant Management for Complex Systems and Software Engineering

Systematic & Strategic Reuse of Simulink® Models

Systematically reusing Simulink models across multiple systems and product variants efficiently and precisely is a problem due to the difficulty of specifying how model elements may vary between products. pure::variants for MATLAB® Simulink is an integrated solution that enables systematic Variant Management and reuse of models across multiple systems and Simulink Models.

Enabling Product Line Engineering with Variant Management

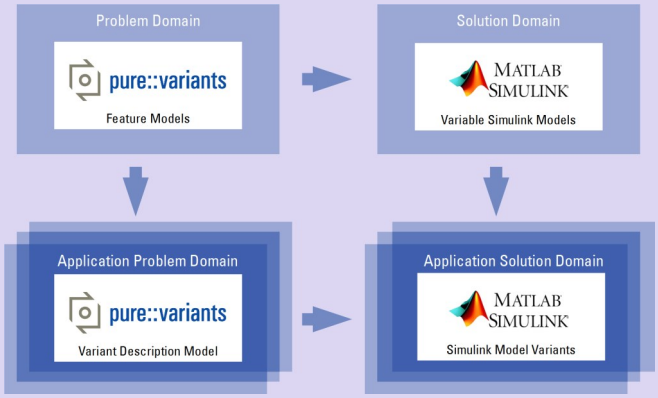
Related products frequently share much of the same software, with only a few differences realizing product-specific functionality. However, much of the challenge of developing related products comes from managing these differences. Variant management addresses this problem by enabling the development of a group of related products as a whole, rather than as individual, independent projects.

pure::variants is a purpose-built variant management tool. It manages your product line while integrating seamlessly into existing development processes and therefore streamlines the processes of developing your product line as a whole while producing individual product variants.

Variant management is required in all stages of Product Line development. However, traditional software development tools are often focussed on single system development. pure::variants closes this gap by providing a model-based infrastructure for variability modelling and variant definition in all phases of a system and software development. This allows existing tools to be augmented to handle variability and variants more efficiently. With its open interfaces, variant information can be used consistently in requirements engineering, during systems design and implementation and also in testing.

pure::variants for Simulink®

pure::variants for Simulink provides variability management for Simulink models including StateFlow and TargetLink models. Maintenance and configuration of model variants is now possible within a single master model structure by feature selection in pure::variants. Intrinsic rules and dependency mapping between features ensure valid, accurate and consistent creation of Simulink model variants.



Benefits of pure::variants for Simulink®

- Capture domain know-how about architecture and design variability and share this with other team members.
- Reuse models and functions.
- Works with Real-Time Workshop and dSpace TargetLink.
- Compatible with Simulink 2009b/2010b variability concepts.
- Easy, precise and efficient configuration, assembly and tailoring of model variants with automated conflict detection and resolution during feature selection.
- Integrate model-based-development as part of a Software Product Line.
- Speed production of model-to-code and improve consistency and quality.
- Integrate Requirements Engineering e.g. with pure::variants for IBM DOORS® to achieve traceability and consistency across the systems and software engineering lifecycle.
- Enterprise-scalable open-standards based technology designed to be integrated with ALM and PLM, enabling Product Line Engineering for Systems and Software.

Supported Platforms

pure::variants release 3.2 (or newer)

Simulink® 2006b (or newer)

TargetLink 2.x (or newer) (use of TargetLink is an Option)

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