

# all you need for product lines

## pure::variants for IBM DOORS® & DOORS NG®

### Variant Management for Complex Systems & Software Engineering

#### Systematic and Strategic Reuse of Requirements

pure::variants for IBM DOORS® and DOORS Next Generation® is an integrated solution that enables systematic Variant Management and reuse of requirements across multiple systems and DOORS Requirements Modules. It is a certified Ready for Rational Solution ensuring maximum interoperability and ease of use.

#### Enabling Product Line Engineering with Variant Management

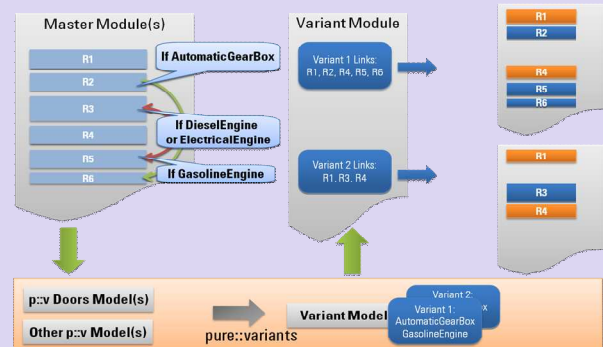
Related products frequently share much of the same software, with only a few differences realizing product-specific functionality. However, much of the challenge of developing related products comes from managing these differences. Variant management addresses this problem by enabling the development 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 streamlines the processes of developing your product line as a whole while producing individual product variants.

Variant management is required at all stages of the development lifecycle and is especially relevant to Requirements Management since most differences between products are directly derived from requirements. In many cases some requirements are only relevant for some product variants, and some requirements may be mutually exclusive. It is also very important to achieve full traceability between requirements and product variants for testing and change management. With full traceability, effort and risk estimates for software changes can be made much more accurately. Furthermore, changes affecting already-shipped products can be handled differently from changes affecting unreleased products.

#### pure::variants for DOORS® & DOORS Next Generation®

Modules in DOORS are linked with pure::variants feature models - these model what is common to all products in the product line and what varies between products in the product line. Additional relations and dependencies between requirements that have not been represented in DOORS are then modelled in pure::variants. From these models individual product variants may then be created using pure::variants. The results are stored in DOORS to record which requirements map to which variants.



#### Benefits of pure::variants for DOORS® & DOORS NG®

- Easy-to-use "In-tool Editor" allows users to view feature models, map features to variation points, edit constraints and perform variant previews directly within DOORS.
- Configuration, instantiation and automated generation of variant-specific requirements documents and configurations, including calculated fields for in-line variant-specific parameters and text strings.
- Enables smooth transition to systematic requirements reuse across variants; can use any existing DOORS Modules.
- Manages the complexity of thousands of requirements and variation points across multiple modules and variants.
- Supports traceability - makes it easy to report on which requirements have been incorporated into which variants.
- Enables fast and precise decisions to be made about which requirements to select for a product or system variant.
- Provides a rich language for modelling relationships and restrictions between requirements.
- Seamlessly integrate with other systems engineering tools like Rhapsody®, Enterprise Architect®, MATLAB® Simulink®, AUTOSAR and utilize shared, dependent and related feature models across engineering domains.
- 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)

IBM DOORS® 8.0 - 9.6, DOORS NG® 4.05 (or newer, see release notes)