Managing requirements across multiple systems and product variants efficiently and precisely is a problem due to the difficulty of specifying how requirements may vary between products. pure::variants Professional for Requirements is an integrated solution that enables systematic Variant Management and reuse of requirements in combination with your Requirements Management Tool.

About 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 (known as a Software Product Line) 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 and producing individual product variants.

Although variant management is required in all stages of the development lifecycle it is especially relevant to Requirements Management since most differences between products are directly derived from requirements. For example, 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.

Benefits of pure::variants Professional for DOORS

- Enables smooth transition to systematic variant management and requirements reuse. Can use existing Requirements Modules and documents and pure::variants models can mirror module hierarchy across the V-Model.
- Manages the complexity of dealing with thousands of requirements and variation points across multiple requirements documents, modules and variants.
- Supports traceability - makes it easy to report on which requirements have been incorporated into which variants.
- Allows you to check the integrity of your Requirements Modules by ensuring you support variability where desired.
- 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.
- Automatically detects and resolves problems when conflicting requirements are specified.
- Integrates with other systems engineering activities e.g. Architecture Design and Model-based development with pure::variants for IBM Rational Rhapsody® or pure::variants for MATLAB® Simulink®.
- Enterprise-scalable open-standards based technology.
- Certified Ready for IBM Rational Software