



pure::variants

Release 4.0

Updates Your Product Line

Your Guide To pure::variants 4.0

- Highlights
 - pure::variants Update Transformations: Product Line And Variant Coevolution Support
 - pure::variants Variability and Variant Analysis: Use Your Model Data To Guide You
 - pure::variants Custom Tool Integration Kit: Hotkey Editor And Variability Exchange Language Support Make Integration Easy For Everyone
- pure::variants Connectors
 - pure::variants In-Tool Editor Improvements: Live Connections Simplify Workflows
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 - New Connectors And Connector Overview: MagicDraw (Technical Preview), MS Office 2016
- Technical Requirements And License Version Changes

Highlights

pure::variants Update Transformations

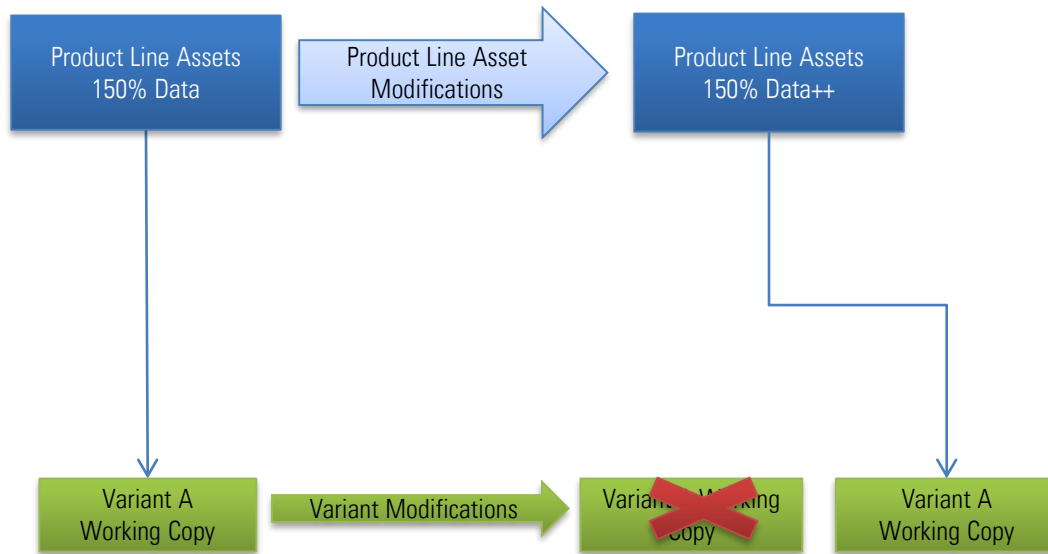
pure::variants Update Transformations: Product Line and Variant Coevolution Support

Before pure::variants 4.0, changing variants assets produced by pure::variants required several additional steps to be executed in order to ensure that these changes survive the next variant transformation.

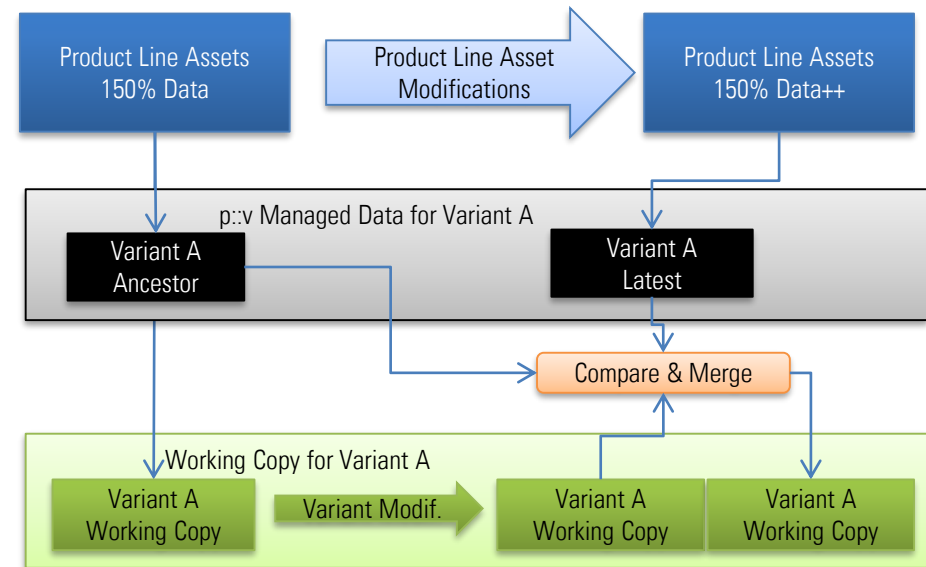
With the new pure::variants Update Transformation Support pure::variants takes care of that challenge for you. Providing variant update support for most of its variant transformation modules enables unprecedented coevolution of your product line assets and the derived variants. Give variants back the freedom to change while benefitting from the continuous evolution of the reusable assets in the product line!

pure::variants Update Transformations: Product Line and Variant Coevolution Support

Without pure::variants Update



With pure::variants Update



pure::variants Update Transformations automatically manage the required data for keeping product line and variants in sync. Bringing together the changes is as easy (or as difficult) as merging two independent streams of changes in single product developments.

pure::variants Update Transformations: Product Line and Variant Coevolution Support

- Transformations providing support for Variant Update Workflows
 - Most pure::variants transformations, which generate files, such as the Standard Transformation, model transformations such as MagicDraw, and many more.
 - Global Configuration enabled tools such as DOORS Next Generation, Rhapsody (Design Manager): Update used Jazz Streams and Change Sets
 - DOORS 9.x: Our Connector provides special support in order to provide Compare and Merge
- The user guide and the Connector manuals contain more information how to enable and use the pure::variants Update Transformations.
- Transformation Modules which do not provide Update Support will indicate this in the Transformation Configuration.

pure::variants
Variability and Variant Analysis

pure::variants Variability and Variant Analysis

Once the number of variants grows, it becomes necessary to be in control of unintended variants and variability. With hundreds or thousands of features refactoring the variability based on knowledge gained from the selection patterns in variants can become difficult, as there is a huge amount of data to be analyzed in order to identify the selection patterns.

pure::variants now provides dedicated Variability and Variant Analysis functions in order to help you. You may use these functions to identify if there are similar or even the same configurations in variants, to find variants with a given selection pattern and to identify the selection patterns.

The results can be visualized in pure::variants or exported as reports for later analysis or tracking.

pure::variants Variability and Variant Analysis

Selection Clusters

- Cluster 16 (3)
- Cluster 17 (4)
 - Elements
 - Regions (4)
 - Austria
 - Denmark
 - EMEA
 - EU
 - VDMs With Selection (5)
 - BaseLight_EMEA
 - Demo
 - HighLight_EMEA
 - ProductA
 - ProductB
 - VDMs With Deselection (6)
 - BaseLight
 - BaseLightDemo
 - BaseLight_USA_Canada
 - HighLight
 - HighLight_Canada
 - HighLight_US
 - Cluster 18 (8)

Find Similar Variants

Similar Variants
Similar variants of 'BaseLight'

Select Variant Models

Similarity	Variant Model
<input type="checkbox"/> 100 %	BaseLightDemo
<input type="checkbox"/> 95 %	BaseLight_EMEA
<input type="checkbox"/> 94 %	BaseLight_USA_Canada
<input type="checkbox"/> 89 %	ProductB
<input type="checkbox"/> 85 %	Demo
<input type="checkbox"/> 78 %	ProductA
<input type="checkbox"/> 76 %	HighLight
<input type="checkbox"/> 74 %	HighLight_US
<input type="checkbox"/> 73 %	HighLight_Canada
<input type="checkbox"/> 69 %	HighLight_EMEA

Open Models
Open selected Variant Description Models:

Find Derived Variants

Same Selection

Variant Models with at least the same selection as 'BaseLight'

Select Variant Models

Variant Model
<input checked="" type="checkbox"/> BaseLight_EMEA
<input checked="" type="checkbox"/> BaseLight_USA_Canada
<input checked="" type="checkbox"/> BaseLightDemo

Similarity Matrix

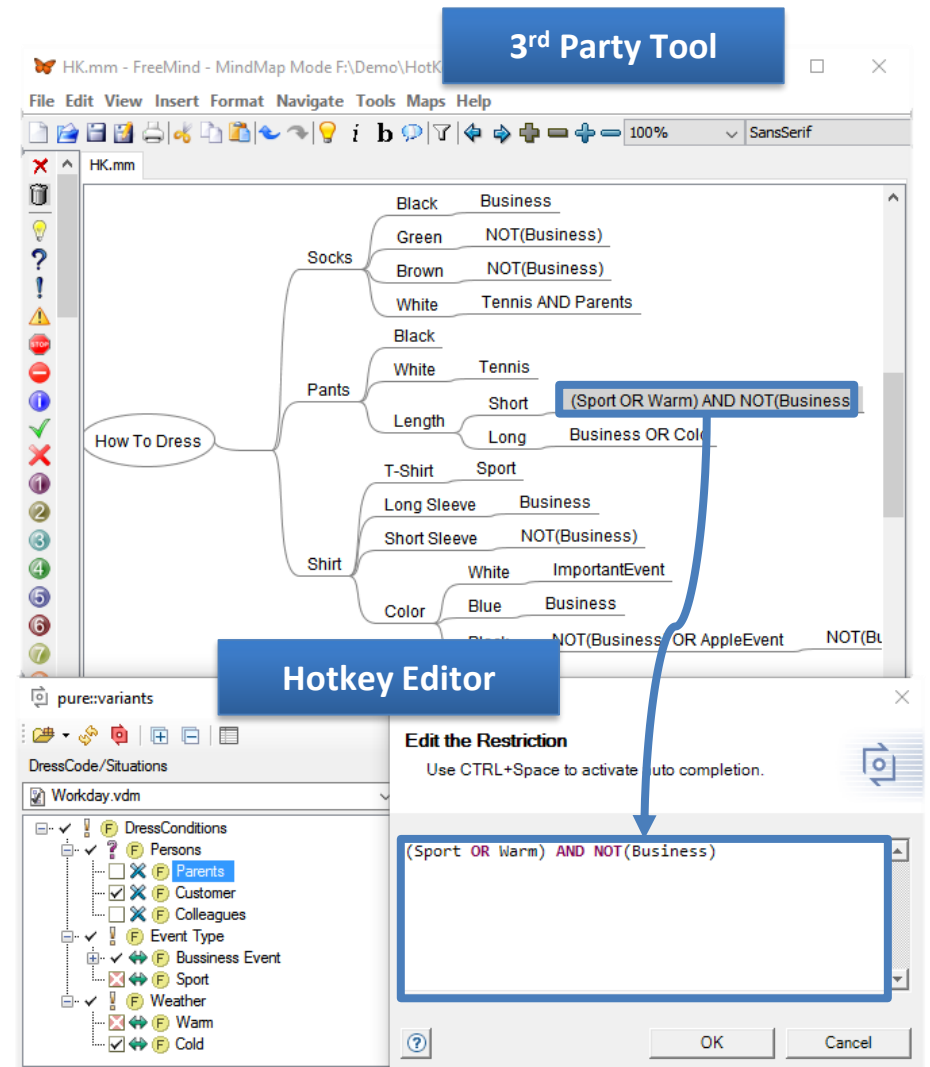
	Demo	HighLight	HighLight_Canada	HighLight_EMEA	HighLight_US	ProductA	ProductB
BaseLightDemo	100%	85%	73%	69%	74%	78%	89%
BaseLight_EMEA	95%	90%	68%	74%	69%	83%	94%
BaseLight_USA_Canada	94%	86%	76%	66%	75%	73%	85%
Demo	85%	71%	72%	77%	71%	74%	89%
HighLight	76%	71%	94%	92%	97%	57%	70%
HighLight_Canada	73%	72%	89%	89%	94%	55%	68%
HighLight_EMEA	69%	77%	89%	89%	89%	61%	74%
HighLight_US	74%	71%	94%	89%	89%	55%	68%
ProductA	78%	57%	55%	61%	55%	85%	85%
ProductB	89%	70%	68%	74%	68%	85%	85%

pure::variants
Custom Tool Integration Kit

pure::variants Custom Tool Integration Kit

pure::variants has been providing easy-to-use ways to integrate pure::variants into your environment such as custom transformations, e.g. using JavaScript.

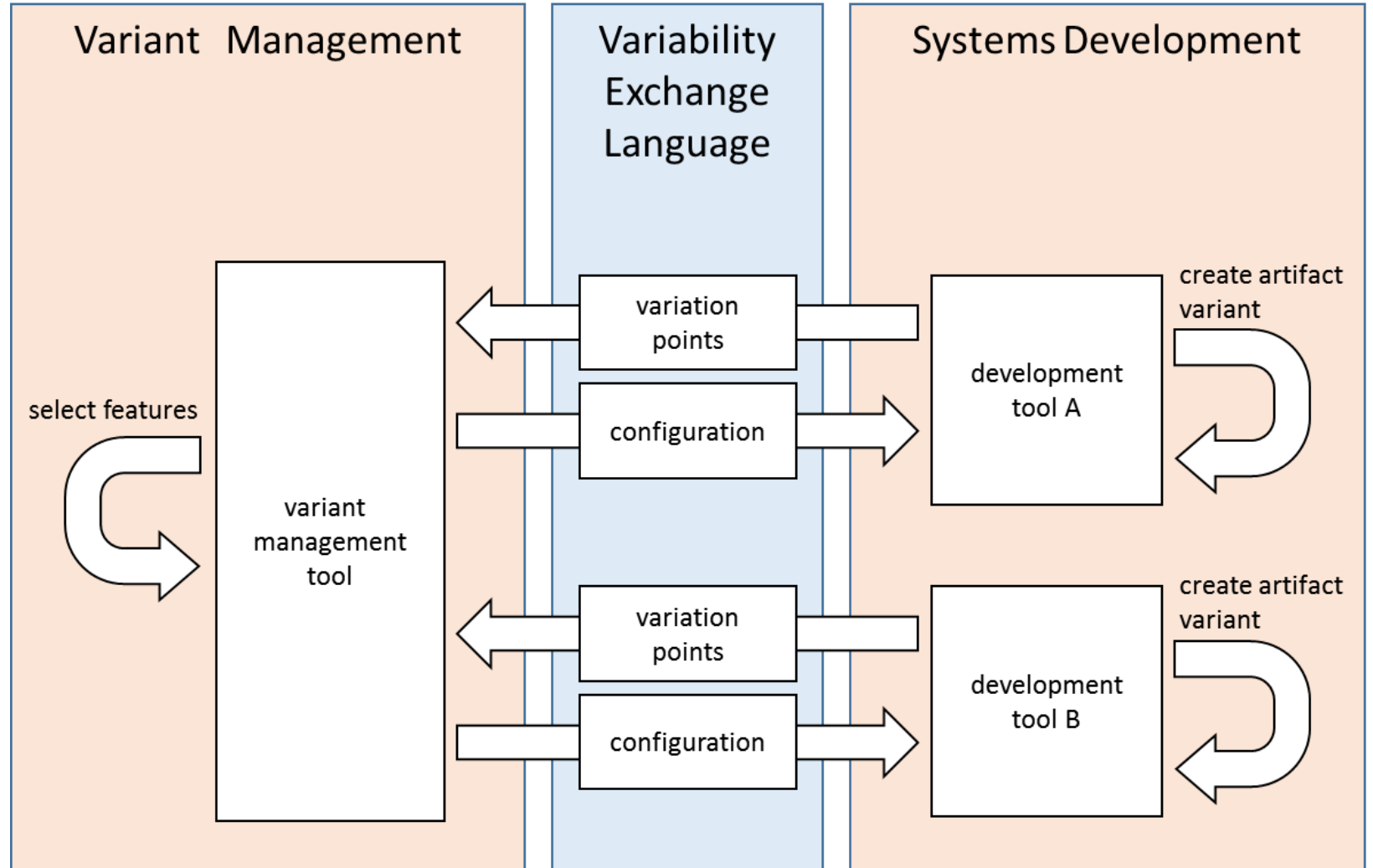
The new pure::variants Custom Tool Integration Kit takes this one step further. The included Hotkey Editor enables you to add pure::variants rules to virtually every data you want to annotate with the full comfort of the pure::variants Rule Editor known from our pure::variants Connectors.



pure::variants Custom Tool Integration Kit

Variability Exchange Language

In addition the new support for the Variability Exchange Language* (VEL) makes it super-easy to interface your tool specific variation point concept with pure::variants logic just by passing VEL data to pure::variants and getting a VEL configuration back.



*see <http://www.variability-exchange-language.org/>

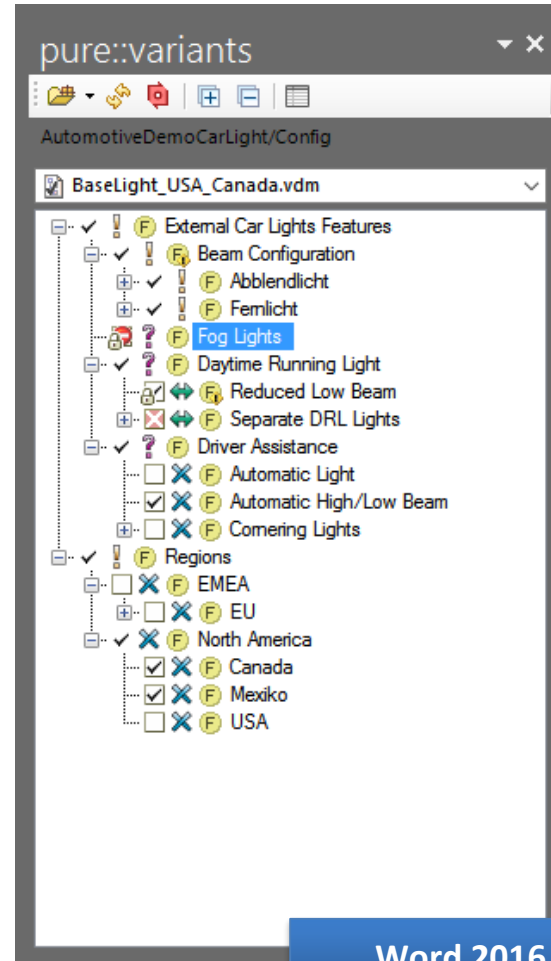
pure::variants Connectors

pure::variants
In-Tool Editor Improvements

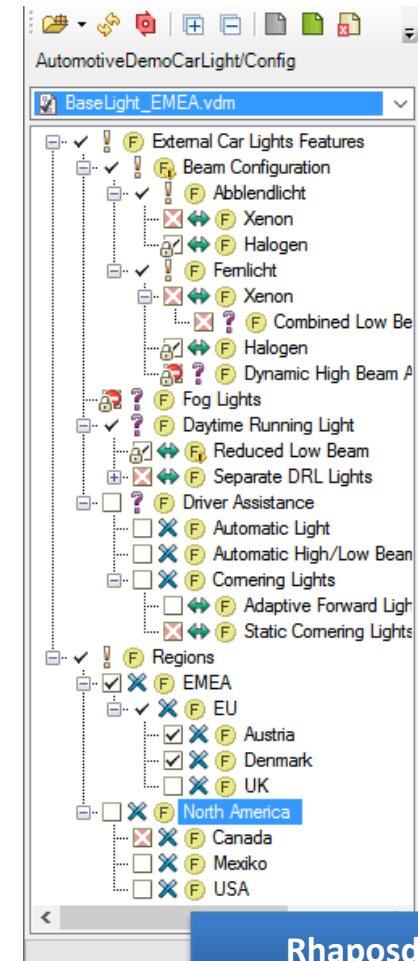
pure::variants In-Tool Editor Improvements

Live Connections Simplify Workflows

An often requested improvement now simplifies your editing workflows in 3rd party tools. All pure::variants Connectors providing In-Tool Editors are now using Live Connections with pure::variants. This means, every change to a variant is immediately visible in all connected tool integrations. The new UI also integrates a simplified variant selection from all variants of a configuration space.



Word 2016



Rhapsody

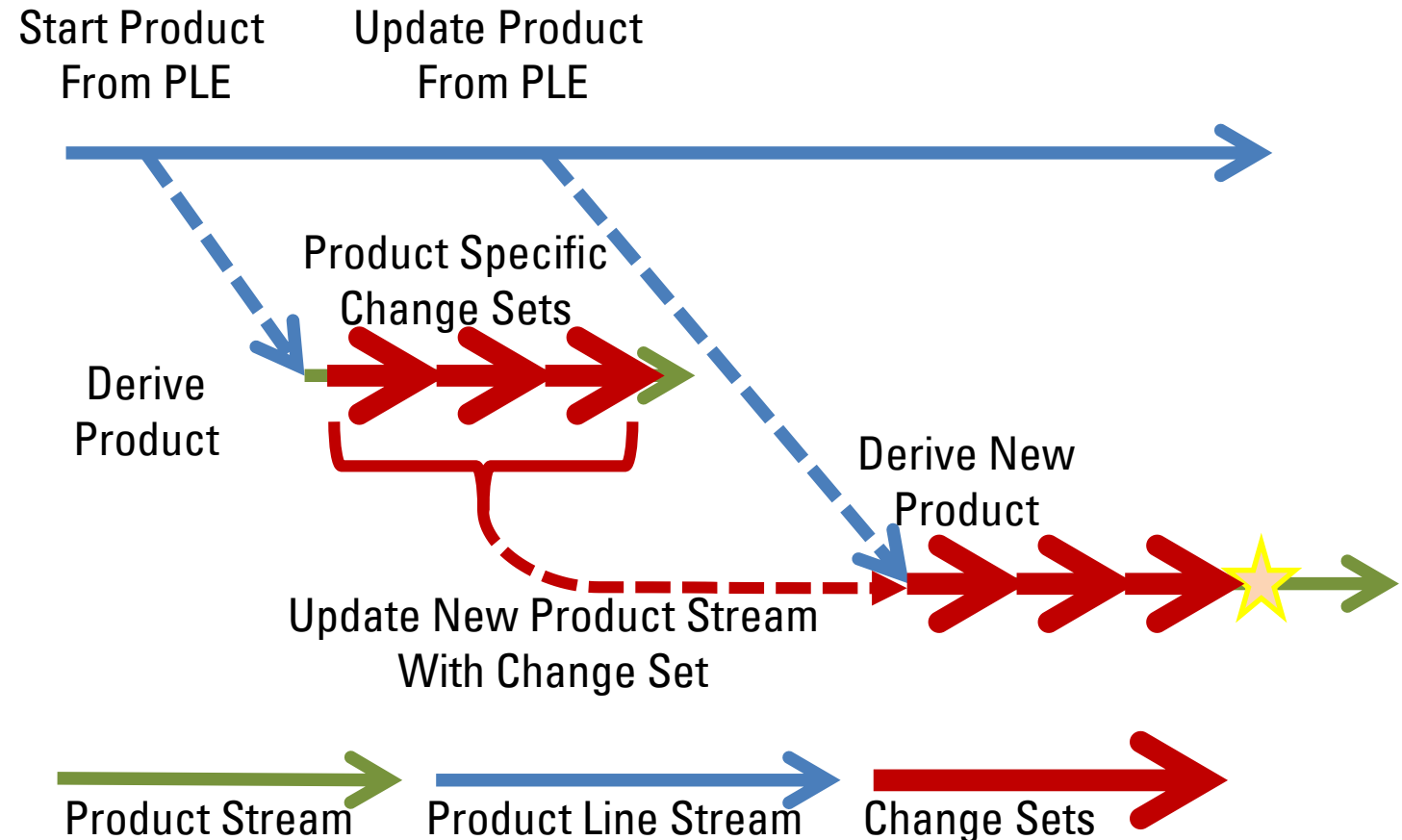
pure::variants
Global Configuration Support

pure::variants Connectors for IBM Jazz-based Tools

Global Configuration Support: Streams and Change Sets

All pure::variants Connectors for IBM tools based on the Jazz Platform now support Global Configuration concepts like Product Variant representation as Streams and updating Variants by using Change Sets.

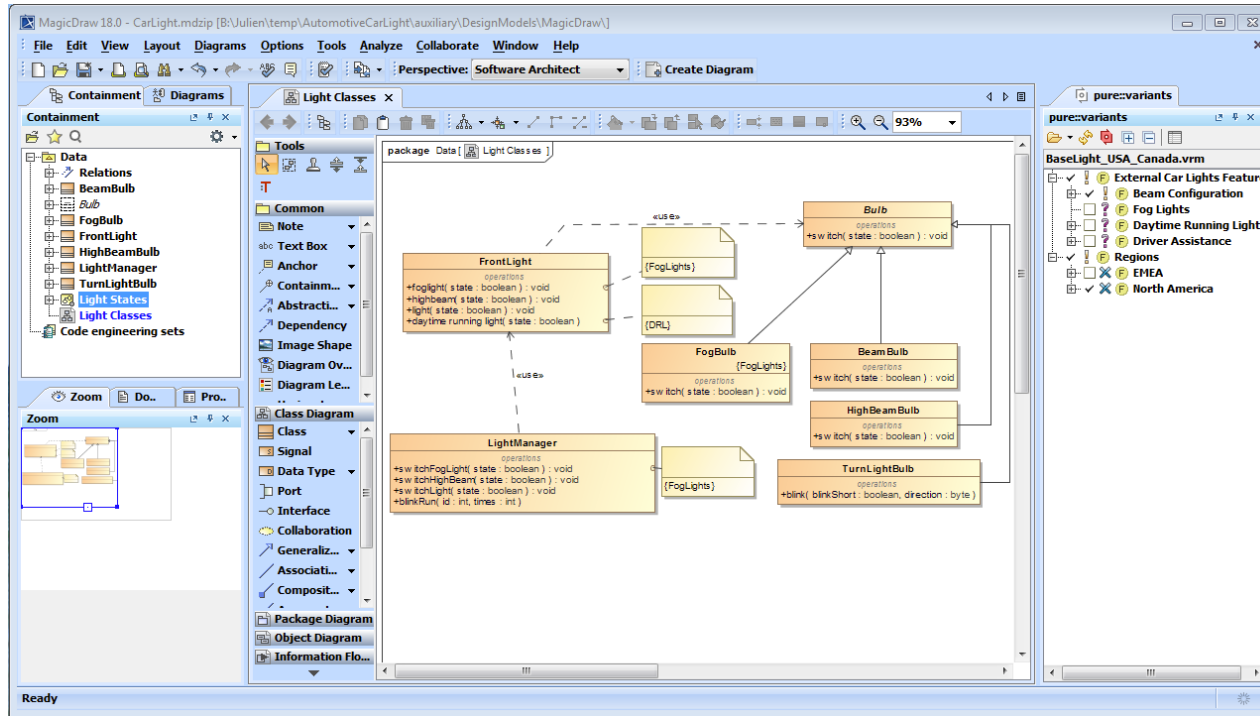
Supported tools include Doors Next Generation, Rational Quality Manager, and Rhapsody Design Manager.



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New Connectors

pure::variants Connector for MagicDraw Technical Preview



New in our list of available pure::variants Connectors is the Connector for NoMagic's MagicDraw Modeling Tool. It provides the familiar In-Tool Editor and offers both structural and parametric variability concepts.

Please note that this is a technical preview only. It works with MagicDraw 18.x and requires in addition to our Connector also a special MagicDraw component, available on request.

pure::variants Connector for Microsoft Office Support For Office 2016

Now officially supported are Microsoft Word and Excel 2016, growing the list of supported Microsoft Office Suites to Office 2007, 2010, 2013, and 2016.

The screenshot displays two overlapping Microsoft Office 2016 windows. The top window is Microsoft Word, showing a document titled 'Front Lights Spec.docx' in Compatibility Mode. The ribbon includes File, Home, Insert, Design, Layout, References, Mailings, Review, and View. The bottom window is Microsoft Excel, showing a spreadsheet titled 'Carlight Example.xlsx'. The ribbon includes File, Home, Insert, Page Layout, Formulas, Data, Review, and View. A 'pure::variants' connector window is open, displaying a tree view of variants for 'AutomotiveDemoCarLight/Config'. The tree includes 'External Car Lights Features' (Beam Configuration, Fog Lights, Daytime Running Light, Driver Assistance) and 'Regions' (EMEA, North America). The Excel spreadsheet shows a table with columns A-F and rows 1-9. The formula bar displays 'NOT(USA OR Canada)'. The table content is as follows:

ID	Head Lights
1	
23	The beam pattern must fulfil the Federal M
5	High Beam
	The high beam is activate if the user press
28	light mode switch is set to full light mode.
29	The high beam is deactivated temporarily if
	camera.
21	The beam must conform to R98 — Headlar
	light source
22	The beam must conform to R112 — Headla
	passing beam and/or a driving beam and e
	The high beam is activated if the user pres
30	either the light mode switch is set to full l
	to automatic and light conditions require f

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Connector Overview

pure::variants Standard Connectors Overview

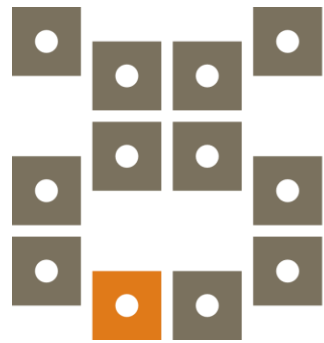
AUTOSAR / ARTOP	IBM Rational DOORS	IBM Rational DOORS Next Generation	IBM Rational Rhapsody
NoMagic MagicDraw (Preview)	Source Code Management	Version Control Systems	Sparx Systems Enterprise Architect
Microsoft Word	Microsoft Excel	EMF Feature Mapping	PTC Integrity
IBM Rational Quality Manager (Preview)	HP Quality Center / ALM (Preview)	BIRT	Mathworks Simulink

pure::variants 4.0
Technical And License Changes

pure::variants 4.0

Technical Requirements And License Changes

- Java Version: Support for Java 7+8
- 32/64bit Support:
 - Full use of 64bit on Windows and Linux
 - 32bit supported on 32bit Machines
- Eclipse
 - Eclipse 3.8.2 included in Installer
 - Minimum Version: Eclipse 3.6
- Recommended Minimal Hardware:
Multicore CPU, 2GHz, 2GB RAM
- USB Dongle Users:
 - CodeMeter 6.10 required
- License Version Change
 - pure::variants 4.0 requires new license files, old licenses will not be accepted.
 - New 4.0 licenses can be used with pure::variants 3.2



pure·systems