IBM

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Rational Rhapsody/BigLever Gears Bridge solution.

Highlights

● **Enables use of Rational Rhapsody projects and packages as modules in the Gears production line**

● **Allows conversion of Rational Rhapsody model elements to variation points**

● **Enables logic editing for Rational Rhapsody model element variation points**

● **Facilitates running the Gears actuator from within Rational Rhapsody software**

● **Supports product impact analysis of model element changes via Gears membership**

Model-driven development (MDD) technology provides a powerful enabler for the rapid development of individual products within a product line. It also offers greater conceptual clarity for the maintenance and evolution of those products over time. But companies still face complex challenges in managing product diversity across a product line.

Now, with the integration of the IBM Rational® Rhapsody® MDD product and BigLever Software's innovative software product line (SPL) engineering solution, the new Rational Rhapsody/BigLever Gears Bridge solution provides a simple and elegant approach for effectively incorporating the management of product diversity into your MDD processes.

Integrated MDD and SPL capabilities
The Rational Rhapsody/BigLever Gears Bridge solution—codeveloped by IBM and BigLever Software—offers integrated

MDD and SPL technologies that enable you to easily leverage the benefits of MDD in your product line development lifecycle.

Specifically, the Rational Rhapsody/BigLever Gears Bridge allows you to:

• Use SPL mechanisms to manage the diversity for a product line portfolio in a single, consolidated MDD model as a highly scalable alternative to cloned copies of models or one-size-fits-all Unified Modeling Language (UML) and Systems Modeling Language (SysML) models.
• Automatically configure different Rational Rhapsody model behaviors for different products by making product feature choices in a Gears feature profile.
• Convert Rational Rhapsody model elements into Gears variation points to encapsulate the SPL diversity for that model element, without extending or complicating UML and SysML models.

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- Use one or more Rational Rhapsody models—either packages or projects—in a larger collection of reusable assets for the development lifecycle of a Gears SPL portfolio.
- Perform integrated SPL operations—such as product configuration, variation point editing and variation impact analysis—directly from Rational Rhapsody menus.

Bridge plug-in extensions

The Rational Rhapsody/BigLever Gears Bridge solution takes the form of a dual plug-in that provides the following extensions to each product.

Gears plug-in extensions

On the Gears side, the solution enables you to include Rational Rhapsody MDD models as another form of core asset within a Gears SPL. You can use the Gears product configurator to automatically configure the different behaviors of a Rational Rhapsody model, based on your feature profile selections made within Gears.

Using MDD models as first-class SPL core assets, you can automatically configure different instantiations of those models without having to use clone-and-own modeling approaches.

Rational Rhapsody plug-in extensions

On the Rational Rhapsody side, the solution allows individual model elements within an MDD model to be converted into first-class Gears variation points. As a result, the diversity of the model elements needed to create different products within the portfolio can be managed as variation points within the model.

The numerous strategic benefits offered by the Rational Rhapsody and Gears synergy can help you dramatically optimize your product line's scalability while improving productivity and driving down defect rates—all with a rapid time to market.

For more information

To learn more about the Rational Rhapsody/BigLever Gears Bridge solution, please contact BigLever Software at:

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