

Solution Brief

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**

Rational Rhapsody/BigLever Gears Bridge solution.

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.



Rational Rhapsody/BigLever Gears Bridge details

Model elements that can be variation points

- Blocks/classes
- Objects/instances
- States/actions
- Attributes
- Events
- Operations
- Requirements
- Transitions
- Types

Product version

- Rational Rhapsody Version 7.3+
- BigLever Gears Version 5.5+

Operating system

- Microsoft® Windows®

- 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:

info@biglever.com

www.biglever.com

1 512 426-2227



© Copyright IBM Corporation 2009

IBM Corporation
Software Group
Route 100
Somers, NY 10589
U.S.A.

Produced in the United States of America
June 2009
All Rights Reserved

IBM, the IBM logo, ibm.com, Rational, and Rhapsody are trademarks or registered trademarks of International Business Machines Corporation in the United States, other countries, or both. If these and other IBM trademarked terms are marked on their first occurrence in this information with a trademark symbol (® or ™), these symbols indicate U.S. registered or common law trademarks owned by IBM at the time this information was published. Such trademarks may also be registered or common law trademarks in other countries. A current list of IBM trademarks is available on the Web at "Copyright and trademark information" at ibm.com/legal/copytrade.shtml

Microsoft and Windows are trademarks of Microsoft Corporation in the United States, other countries, or both.

Other company, product, or service names may be trademarks or service marks of others.

References in this publication to IBM products or services do not imply that IBM intends to make them available in all countries in which IBM operates.

The information contained in this documentation is provided for informational purposes only. While efforts were made to verify the completeness and accuracy of the information contained in this documentation, it is provided "as is" without warranty of any kind, express or implied. In addition, this information is based on IBM's current product plans and strategy, which are subject to change by IBM without notice. IBM shall not be responsible for any damages arising out of the use of, or otherwise related to, this documentation or any other documentation. Nothing contained in this documentation is intended to, nor shall have the effect of, creating any warranties or representations from IBM (or its suppliers or licensors), or altering the terms and conditions of the applicable license agreement governing the use of IBM software.

IBM customers are responsible for ensuring their own compliance with legal requirements. It is the customer's sole responsibility to obtain advice of competent legal counsel as to the identification and interpretation of any relevant laws and regulatory requirements that may affect the customer's business and any actions the customer may need to take to comply with such laws.

Any material included in this document with regard to third parties is based on information obtained from such parties. No effort has been made to independently verify the accuracy of the information. This document does not constitute an expressed or implied recommendation or endorsement by IBM of any third-party product or service.