



## Telelogic Rhapsody Developer Multi-Language

Managing shrinking design cycles and design complexity, combined with juggling a limited number of resources, increased quality demands and multi-site development teams makes for a challenging design environment. Languages such as C and C++ replaced assembler years ago as the preferred language for embedded programming, resulting in a huge increase in productivity. Today, Telelogic Rhapsody® Developer Multi-Language offers users the same level of productivity enhancements.

### Overview

Rhapsody is the leading MDD environment for creating applications that are either embedded or need to meet real-time constraints. Rhapsody's key enabling technologies consist of modeling, requirements traceability, Design For Testability (DFT), complete application generation and support for collaborative development enhance communication, enabling errors to be found and corrected early in the process and reduce development time through automation.

Telelogic Rhapsody Developer Multi-Language is a MDD environment that enables true concurrent engineering, where systems and software engineers can work together with maximum flexibility and optimal communication for collaborative efforts. By supporting a variety of modeling platforms such as UML 2.0, Functional C as well as Domain Specific Languages (DSL), Rhapsody is capable of fully modeling system architectures across any discipline, and allows the simulation, implementation and testing of those architectures in an easy push-button environment.

The Rhapsody Developer Multi-Language product allows you to model and generate multiple languages within one Rhapsody design. Complete applications can be generated with the push of a button from the architectural and behavioral models, including the infrastructure files necessary to build the entire system. Language development can be specified at the component level all the way down to the individual class level. This allows model organization based on language development as well as giving you the ability to describe how different language elements communicate with one another, offering a complete solution for multi-language development.

### Key Modeling and Requirements Traceability Capabilities

- UML 2.1 (Activity, Class, Component, Structure, Deployment, Interaction, Package, Sequence, Statechart, Usecase Diagram), Functional C and SysML 1.0 visual modeling support
- Advanced graphics and Domain Specific Language (DSL) support for enhanced communication and design organization
- Advanced browser with model organizer
- Automatic documentation generation
- Static model checking for completeness and consistency
- XML\* import/export and Rose Import\* (with additional add-on pack)
- Work in a functional, object based or object-oriented paradigm
- Integrated requirements modeling to ensure the design always meets the requirements
- Model compatibility with Rhapsody System Designer and Rhapsody System Architect

### BENEFITS

- Maximum flexibility, optimized communication and collaboration using models
- Eliminate defects early and increase quality with design simulation
- Reduced development times through automatic C, C++, Java and documentation generation
- Increases savings and boosts productivity with legacy code, systems and model reuse
- Ensure the design meets the requirements
- Enhance software asset reuse

### FEATURES

- UML 2.1 and Functional C design modeling environment with Domain Specific Language (DSL) support including DoDAF\* and The MathWorks Simulink Integration\*
- Model verification with full model simulation and execution
- Full application generation of C, C++, and Java in an integrated design environment
- Requirements modeling and traceability features
- Easily integrate your existing C and C++ code into the modeling environment using reverse engineering and code visualization
- Dynamic model / code associativity enabling design to be done using either code or diagrams providing maximum flexibility while ensuring the two remain synchronized
- Customizable\* automatic documentation

### SYSTEMS REQUIREMENTS

- Windows XP and 2000
- Red Hat Enterprise Linux 3.0, 4.0
- Minimum CPU: Pentium II 800MHz
- Host Disk Space: Approximately 750 MB (Full Installation)
- Host Memory: Minimum 256 MB RAM, Recommended 512 MB

For the most up-to-date systems requirements, please refer to the release notes for the specific Rhapsody version you are using.

## Key Application Generation Capabilities

- Complete C, C++, and Java code generation reducing time-to-market
- Dynamic Model Code Associativity (DMCA) allows design at either the code or model level
- Visualize external code without modifying it for integration into the model
- Reverse engineer existing code into your model for easy updates
- Customize the generated C code using the C Rules Editor and the RulesPlayer Add-ons

## Key Collaboration Capabilities

- Design collaboration allows all size teams to work together effectively
- Base aware graphical differencing and merging
- Automatic merging of design components
- Customizable\* documentation generation
- Partial loading and unloading of components
- Multiple model environment with cross referencing
- Command line code generation for integration into the build process
- Configuration Management capabilities\* with enhanced integration with Clearcase (with additional add-on pack)

## Key Design For Testability Capabilities

- Design for Testability enables errors to be found and eliminated early in the process
- Simulate the model on the host
- Execute the application on the target and animate the model on the host
- Requirements Based Testing (with TestConductor add-on)
- Model-driven test generation (with ATG add-on)
- Collaborative Debugging (with additional add-on pack)

## IDE Integrations

- MULTI (Green Hills) 4.0.5 (C/C++)
- MULTI (Green Hills) 2000 (C++)
- Workbench (Wind River) 2.4 (C/C++)
- Tornado (Wind River) 2.2 (C/C++)
- pRISM+ (Wind River) 2.5 (C/C++)
- Eclipse 3.2 with CDT 3.1 (C/C++)

For the most up-to-date list of IDE Integrations, please refer to the release notes for the specific Rhapsody version you are using.

## Target Operating System Adapters

- Green Hills: INTEGRITY V 4.0.8, 5.0 (C/C++)
- WindRiver: VxWorks V 6.1 (Workbench V 2.2) (C/C++)
- WindRiver: pSOS V 2.5 (C/C++)
- Microsoft: Windows NT, XP, 2000 (C/C++)
- Microsoft: Windows CE .NET V 4.2 (C++)
- Mentor Graphics: Nucleus V 1.13.7 (C/C++)
- Enea: OSE Delta V 4.5 (C++)
- LynuxWorks: LynxOS 4.0 (C++)
- MontaVista: Linux V 3.1 (C/C++)

- Red Hat (Enterprise Linux) 3.0, 4.0 (C++)
- ThreadX (Express Logic)
- QNX: Neutrino V 6.1 (C++)
- Sun: Solaris V 2.7, 2.8, 2.9 (C++/Java)
- IDF (I-Logix) (C)

For the most up-to-date list of target operating system adaptors, please refer to the release notes for the specific Rhapsody you are using. Additional adaptors can be created by Telelogic or obtained from the client center at [www.telelogic.com/modeling](http://www.telelogic.com/modeling).

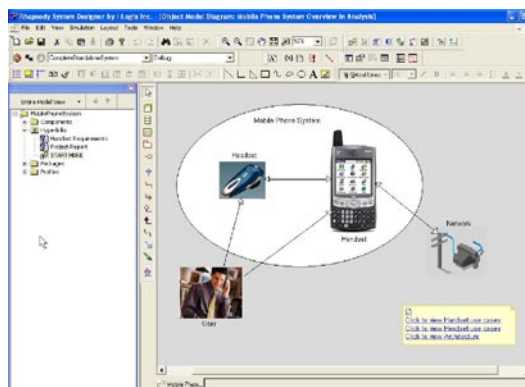
## Rhapsody Developer Add-Ons

(Capabilities previously marked with \* are provided by these optional add-ons)

Rhapsody Developer may be customized with additional functionality. There are a number of value add-ons. These include:

- Interfaces Pack: Includes the Simulink integration, basic DOORS interface for requirements traceability, CM interface for collaborative development with most CM tools, Rose Importer and XMI support
- Tools and Utilities Pack: Includes ReporterPLUS, a highly customizable template based documentation utility, and Webify Toolkit, a rapid prototyper/model stimulator
- Value Pack: Includes the Interfaces Pack and the Tools and Utilities Pack
- Gateway: includes advanced interface to popular requirements management tools (DOORS, Requisite Pro, CalibreRM and Calibre 2005) and popular requirements authoring tools (Word, Excel, PowerPoint, PDF)
- Gateway Value Pack: Includes the Value Pack and the Gateway (Note: does not include basic DOORS interface).
- DoDAF Pack: Includes support to allow Rhapsody to create high quality DoDAF product artifacts.

For details, see the appropriate data sheet and the release notes for the add-on you are interested in.



Rhapsody Developer supports multiple domain specific modeling languages, allowing developers to operate in a natural, seamless environment for each application.

## About Telelogic

Telelogic® is a leading global provider of solutions for automating and supporting best practices across the enterprise — from powerful modeling of business processes and enterprise architectures to requirements-driven development of advanced systems and software. Telelogic's solutions enable organizations to align product, systems, and software development lifecycles with business objectives and customer needs to dramatically improve quality and predictability, while significantly reducing time-to-market and overall costs.

Visit us at [www.telelogic.com](http://www.telelogic.com) for more information.

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