DOORS Day
and
the Systems Engineering Workbench

San Jose, CA
August 19, 2010
Requirements are everywhere and touch everything
Rational DOORS product family

**Rational DOORS**
Requirements management and traceability platform for complex systems and software development

**DOORS Web Access**
Rich Internet application providing globally distributed stakeholders access to review, edit, and discuss requirements in the DOORS database through a Web browser

**Publishing Engine**
The generic tool for publishing across the Rational tool suite, provides DOORS with an enhanced export to Word, Pdf, Html & XsIFO
Introduction of the IBM Team

- Nancy Rundlet, Sales Executive for Requirements Management
- Deric Merino, Technical Sales Specialist
- Greg Gorman, Program Director, WW Systems Engineering Product Delivery
- Manohar Rao, Technical Sales Specialist
- Chuck Hilger, Systems Delivery, Sales Leader
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<td>- Breakout#1 - Rational Rhapsody</td>
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<tr>
<td></td>
<td>- Breakout #2 - Reporting solutions - Rational Publishing Engine and Rational Insight</td>
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<td>- Breakout #3 - A topic of YOUR choice - Take advantage of the technical experts to ask specific questions or go into more depth on any topic</td>
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Companies in Attendance

- Abbott Diabetes Care
- Abbott Hematology
- Abbott Laboratories
- Accela, Inc.
- AdvancedActions
- Applied Materials, Inc.
- BAE Systems
- CloudShield Technologies
- Computer Application
- EBR Systems, Inc.
- General Dynamics - Advanced Information Systems
- Life Tech
- Lochkeed Martin IS&GS
- Lockhee Martin Space Systems Company
- Loral/SSD
- Man Made Machines
- Morpho Detection Inc
- NASA Ames Research Center
- Northrop Grumman
- Northrop Grumman ES/MS
- Novartis Diagnostics
- Philips Healthcare
- RIM Financial
- Sandisk
- Scene Science Inc.
- Securus Enterprises
- SGT Inc. / NASA Ames Research Center
- Space Systems / Loral
- Technica Solution
- The Intuitive Edge
- UCO Lick Observatory, Laboratory for Adaptive Optics
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What’s New in DOORS 8 and 9

Nancy Rundlet
New slides (annotated with version #)
Author, 10/20/2009
Test Tracking Toolkit (T3) (8.1)

- Monitor the quality of requirements rather than the statistics of testing
- Graphical aggregation of test results mapped along side requirement
Requirements test status

Filter on tests—which have failed/passed

<table>
<thead>
<tr>
<th>2 Functional Requirements</th>
<th>Expected Test Result</th>
<th>Actual Test Result</th>
<th>Test Engineer</th>
<th>Test Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1 Power car</td>
<td>N/A</td>
<td></td>
<td></td>
<td>Pass</td>
</tr>
<tr>
<td>2.1.1 Move car</td>
<td></td>
<td></td>
<td></td>
<td>Exempt</td>
</tr>
<tr>
<td>2.1.1.1 Move forwards</td>
<td>Car can travel forwards at 200kph.</td>
<td>202.4kph</td>
<td>Low Hamilton</td>
<td>Pass</td>
</tr>
<tr>
<td>2.1.1.2 Move backwards</td>
<td>Car can travel in reverse at 20kph.</td>
<td>20.8kph</td>
<td>Steve Hart</td>
<td>Exempt</td>
</tr>
<tr>
<td>2.1.2 Accelerate car</td>
<td>Car can accelerate from 0-100kph in under 10s.</td>
<td>8.7s</td>
<td>Steve Hart</td>
<td>Pass</td>
</tr>
<tr>
<td></td>
<td>Car can accelerate from 100-150kph in 10s.</td>
<td>9.3s</td>
<td>Steve Hart</td>
<td>Pass</td>
</tr>
<tr>
<td></td>
<td>Car can accelerate from 150-200kph in 15s.</td>
<td>14s</td>
<td>Steve Hart</td>
<td>Pass</td>
</tr>
</tbody>
</table>
Traceability taking you outside of DOORS (8.1)

- By extending traceability to go beyond the boundaries of DOORS, more people are encouraged to work against requirements.
- Create links from DOORS to elements stored within applications outside of DOORS.

![Screenshot of Edit External Link - DOORS dialog box with example settings: Name: BBC News, Description: This is a link to the BBC News Service, Link Path: http://news.bbc.co.uk, Direction: Out.]
URLs bringing you back in to DOORS (8.1)

- Insert links into other applications that connect back to requirements stored in DOORS
- Security controls still apply
- Authentication still required
- URLs can also take you to a DOORS database, Project, Folder, Module or Object
Broadcast Messaging (8.2)

- Message of the day
  - Client connections see a DB Manager configured message prior to login
- Broadcast messaging
  - DB Manager power, facility to send message to all connected clients
- Lock request messages
  - Broadcast a message to users to request a lock on a module
Document hierarchy

- Automatic indentation to conform to document structure
- Easy manipulation of hierarchical requirements
- Promote and demote requirements
Table support (8.2)

- View based table configurations
  - Enhances clarity of tables
  - Configure tables to display relevant attributes along with different module views

- Format of table cells made more ergonomic
Easier-to-Use Change bars (8.3)

- **Wider** for mouse-impaired users
  - Remember: double click for history
- **Tool tips** to see more information
- **New colors** for accessibility
- **Optional** symbols
  - Baseline requirement
  - New Requirement
  - Unsaved changes
  - Saved changes
  - Deleted requirement
General Enhancements

- Easier to find
  - Find to highlight the word or phrase you are searching for
  - Object highlighting for information not displayed in the view
General Enhancements

- **Printing**
  - Now possible to print the currently selected objects rather than everything in the view

- **History of move operation**
  - Made consistent with other history records
GUI Improvements (9.0)

- Single column multi-level traceability column
  - Display multiple levels of analysis in a single column
GUI Improvements

- Module browser to provide focus over the filter
  - See a visual indication to see which items are in the filter
  - Improves visibility of those line items that are of interest
Welcome! A new welcome page for DOORS (9.0)

- Easy entry to DOORS
  - Favorites
  - Tip of the day
  - Message of the day
- Gain help fast
  - Documentation
  - Support
- Customizable
  - Company specific entry pages to DOORS
  - Configure to your organizations needs
DOORS Discussions (9.0)

- Enabling the requirements review process
  - Review comments written against requirements and documents
  - Comments on comments to make up “Discussions”
  - Synchronous reviews without the need to lock data
- Review comments sit outside of the requirement itself
  - i.e. do not form part of the requirement or DOORS object
- Discussions are raised against information at a particular time
  - i.e. baseline or current version
- Preconfigured discussion columns to review the review
DOORS Discussions

1. Overview

- Join Finley and his friends as they serve the community, solve problems and have fun! Miguel makes a few mistakes and decides he doesn’t want to be a postman anymore.

Spelling corrections (Closed)
1. Richard Watson on 26/03/2008 12:12:09
   US spelling should be used throughout.
   Version/New Folder/User Requirements (while current)
   Data timestamp: 26/03/2008 12:12:09
   Status: Open
2. John Smith on 26/03/2008 12:15:41
   OK - amended spelling.
   Version/New Folder/User Requirements (while current)
   Data timestamp: 26/03/2008 12:15:41
   Status: Open
   That’s fine now, thanks.
   Version/New Folder/User Requirements (while current)
   Data timestamp: 26/03/2008 12:18:28
   Status: Closed (Changed)

Justification required (Open)
1. Richard Watson on 26/03/2008 12:14:00
   I’m not sure that this is a valid OR - it looks more like a solution to me. Can you re-frame it in the form of a specific use case?
   Version/New Folder/User Requirements (while current)
   Data timestamp: 26/03/2008 12:14:00
   Status: Open
2. John Smith on 26/03/2008 12:16:55
   Not sure how I can make this more specific?
   Version/New Folder/User Requirements (while current)
   Data timestamp: 26/03/2008 12:16:55
   Status: Open
   Neither am I. Nevertheless, here’s an example: Everyone is enjoying a ride
Expand requirements driven development using DOORS Web Access

- Improve requirements and product quality by using web based requirements management tools (DOORS Web Access)
  - Best Web browser tool paradigms for easy adoption and increased user productivity
  - Extend RM for virtual workgroups collaborating on a central requirements database
    - No need to physically move data around or synchronize databases
    - Add users without additional software installations

- Wider Adoption for RM Across Enterprise
  - Requirements easily created/edited through commercial Web browsers
  - Fast, efficient global access and editing with comprehensive data security

- Reduce your costs for:
  - Installation and training
  - Exporting / Importing between DOORS users and others
  - Hosting DOORS on Terminal Servers
Who Uses Web Based Requirements Management Tools?

- Anyone without a requirements management solution (DOORS)
- Existing DOORS Customers/Subcontractors
- Development teams seeking light weight tools to support development
- Globally distributed development teams
- Some development roles who would use a web based requirements tool:
  - Requirements analysts
  - Business analyst
  - System analyst
  - IT development
  - Quality assurance
The DOORS Web Access Browser Environment

- Rich web environment for requirements Review and Edit
- Customizable Welcome Screen
Create or Modify Requirements Using DOORS Web Access

Team members are able to:

- Review complete rich requirements specifications
- Create, Modify, Delete requirements in the edit profile
- Use create/edit controls in any existing module
- Have shared access with other team members
- Use configured document views

Module Views

Pictures

Edit Controls

Tables

Edit Menu
Branding (9.2)

- Welcome to IBM Rational DOORS
  - Full branding now encompasses IBM Rational trademarks
Today's DOORS Data Exchange Options

- One of DOORS strengths is its communication of data
  - Principal focus on import and export
  - Or data exchange, limited to two databases, master and supplier
- Existing interfaces include
  - Word Export/Import
  - Partition/Rejoin
  - Archive/Restore
  - CSV/TSV round trip
  - DXL based data Exchange Tools
    - Some internal to IBM
    - Others produced by partners
    - Several produced by customers

There is a need to support more complex exchange scenarios
DOORS 9.2 introduces native support for RIF

- Built in component of DOORS
  - Support for multiple modules
  - Links
  - Delegated Data Control
    - Control modification of requirements
    - Control modification of attributes
- Step 1:
  - Distribute data to multiple databases
- Step 2:
  - Concurrent working on data
- Step 3:
  - Managed merge of data with resolution for overlapping data
Do You Visualize Requirements Today?

**swing, n**
A seat suspended from above, as by ropes, on which one can ride back and forth for recreation.

Sources: [www.dictionary.com](http://www.dictionary.com) and [www.businessballs.com/treeswing.htm](http://www.businessballs.com/treeswing.htm)
Integrating Definition: Requirements Composer

Rich Authoring Environment
- Use Cases
- Glossaries
- UI Sketching and Storyboarding
- Process Sketching
- Rich Text Requirements

Web Review and Approval
- Wiki style interface
- Categorize / Tag
- Comment
- Review / Approve
- Share work instantly
- Users / teams / authorizations
- Linking between all artifacts
- Versioning

Collaboration Server
- Integrate requirements across the application lifecycle

- Create off-line requirements documents in various formats for distribution and review
  - Standard files in MS Word, HTML, PDF, XSL-FO

- Enhance your documentation quality and consistency by sharing and reusing templates
  - Use out-of-the-box templates

- Increase productivity by allowing engineers to focus on engineering, NOT formatting concerns
Requirements Driven Testing

Quality is conformance to requirements

Tests based on requirements ensure deliverables meet customer expectations

Process Automation and Increased Focus
The test team is working against the right set of requirements
Viability of integrations

- Upgrading to DOORS 9.2 enables integration to state of the art commercial products
  - Requirements driven development, ensuring the developers have control of their scope
    - IBM Rational Rhapsody
    - IBM Rational System Architect
    - IBM Rational Software Architect
  - Requirements driven testing, ensuring the test team work against a common set of requirements
    - IBM Rational Quality Manager
    - HP Quality Center
  - Connecting requirements to the development process
    - IBM Rational ClearQuest
    - IBM Rational Change
  - Ensuring the correct requirements are captured and subsequently worked against
    - IBM Rational Requirements Composer
    - IBM Rational Focal Point
DOORS Future Forward

If your organization would like to receive a full futures presentation, please contact your account manager
Note: Some slides have been removed

Nancy Rundlet
### Rational RM portfolio today

*Addressing different cultures and different needs*

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<th>Group</th>
<th>Associated Offerings</th>
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<tr>
<td>Engineering &amp; Compliance cultures</td>
<td>DOORS &amp; DOORS Web Access</td>
</tr>
<tr>
<td>Good outcomes are the result of good,</td>
<td></td>
</tr>
<tr>
<td>controlled processes. “Have we missed</td>
<td></td>
</tr>
<tr>
<td>anything?”</td>
<td></td>
</tr>
<tr>
<td>Market-driven culture</td>
<td>RequisitePro</td>
</tr>
<tr>
<td>Balance process and expedience. “How can</td>
<td></td>
</tr>
<tr>
<td>we get this out faster with good quality?”</td>
<td></td>
</tr>
<tr>
<td>ALM minimalist culture</td>
<td>Requirements Composer</td>
</tr>
<tr>
<td>“We use our main tools for requirements</td>
<td></td>
</tr>
<tr>
<td>too”</td>
<td></td>
</tr>
<tr>
<td>Ad-hoc culture</td>
<td>Team Concert and Quality Manager</td>
</tr>
<tr>
<td>“We don’t do RM”</td>
<td></td>
</tr>
<tr>
<td>“What is RM?”</td>
<td></td>
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50% of project failure can be tracked to poor requirements practices
History of DOORS releases

**DOORS releases**
- Typically released at least annually
- Many older releases are now out of support

**Reasons to upgrade**
- Product quality / performance
- Minimize risk
- Improved productivity for RM practices

<table>
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<tr>
<th>Version</th>
<th>Released</th>
<th>End of support</th>
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<tr>
<td>DOORS 7.1</td>
<td>May-2004</td>
<td>YES</td>
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<tr>
<td>DOORS 8.0</td>
<td>Nov-2005</td>
<td>YES</td>
</tr>
<tr>
<td>DOORS 8.1</td>
<td>May-2006</td>
<td>YES</td>
</tr>
<tr>
<td>DOORS 8.2</td>
<td>May-2007</td>
<td>YES</td>
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<td>DOORS 8.3</td>
<td>Nov-2007</td>
<td>25-Jan-2011</td>
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<td>DOORS 9.0</td>
<td>July-2008</td>
<td>03-Nov-2010</td>
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<td>DOORS 9.1</td>
<td>Nov-2008</td>
<td>Expected Nov-2013</td>
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Recent Steps to Implement our RM Strategy

2008

Acquired Telelogic and DOORS
- Market leader in RM

2009

Requirements Composer 1.0
- Collaborative req. definition
- Visual and textual notations
- Foundation for future offerings

DOORS 9.2 / DWA 1.3
- Requirements Interchange Format (RIF)
- DOORS Web Access Edit
- Rational Quality Manager integration
- IBM-ized DOORS, Chinese/Japanese NLS

2010

RequisitePro 7.1.1
- Package level security
- ReqWeb improvements

RequisitePro “getting info out”
- Rational Publishing Engine for docs
- Rational Insight for dashboards

Acquired Telelogic and DOORS
- Market leader in RM
Recent Improvements in RM Integrations

2009

**DOORS 9.2**
- Rational Quality Manager v2.0 (pictured)
- RRC v2.0
- Rational Insight using RIF exports
- HP QualityCenter v10

**RRC 2.0**
- DOORS 9.2
- RequisitePro
- Rational Software Modeller
- Rational Software Architect
- CALM 2009 (with RTC/RQM)

2010

2011+

Let’s build a smarter planet.
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Using DOORS for Requirements Metrics

Anthony Trebaol
Northrop Grumman
San Jose, CA
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Extending DOORS to the Systems Engineering Workbench

Greg Gorman
Program Director,
World-Wide Systems Engineering Strategy and Delivery

© 2008 IBM Corporation
Products are Getting Smarter Every Time We Look

- One billion camera phones were sold in 2007, double that of 2006

- One customizable device: phone, e-mail, music, Web, camera, GPS, apps, video recorder, e-reader, …

- User productivity and enjoyment have skyrocketed

- In 2000 this would have been science fiction

- In 2010 it’s yesterday’s news!

What’s possible by 2020?
Smart Products Require Innovative Systems

Incremental value is created by global interconnection across products, systems, applications and networks.

**System of Systems**
- Fleet and traffic management systems
- Smart grid hybrid / electric vehicle recharging
- Emergency services, vehicle diagnostics, and GPS / location services

**Systems Engineering**
- Integration of vehicle subsystems into a functioning automobile
- Collaboration and visibility across diverse teams and disciplines

**Software-intensive Subsystems**
- Driver assistance safety alarms
- Adaptive cruise control
- Predictive collision avoidance
- Intelligent navigation
- Hybrid and electric vehicle control
- 360 degree surround vision
Software is the Heart of Today’s Systems Innovation

“The medical field is highly dependent on software, which significantly enhances delivery of patient care.”

“Like many of the components that make up today’s vehicles, the hydraulic hybrid systems are intelligent software-intensive systems.”

“Software has evolved from a hidden component driving functionality to the keystone of product differentiation and end-user experience.”

-- VDC Research
Complexity Creates Development Challenges
Leading to cost overruns, schedule slips and quality issues

**Poor requirements engineering = failed projects**

**Paper-based and manual processes hinder efficiency**

**Complex architecture is difficult to textually explain**

**Functionality is poorly distributed across components**

**Hardware/software integration is often late**

**Many organizations lack formalized practices**

**Silos of people, process, and projects**

<table>
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<th>Geographic Barriers</th>
<th>Organizational Barriers</th>
<th>Infrastructure Barriers</th>
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<tbody>
<tr>
<td>- Poor communication</td>
<td>- Weak collaboration</td>
<td>- Incompatible tools</td>
</tr>
<tr>
<td>- Language, culture, time</td>
<td>- Poor project governance and LOB oversight</td>
<td>- Unreliable access</td>
</tr>
<tr>
<td>- Process gaps resulting in rework</td>
<td>- Security of IP</td>
<td>- Lengthy on-boarding</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Inflexible integration</td>
</tr>
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Modern Approaches for Describing Systems Are Evolving
To Better Manage Complexity and Reduce Time-to-market

Past

- Specifications
- Interface requirements
- System design
- Analysis & trade-off
- Test plans

Future

Moving from manual methods to an automated, visual approach
Rational Workbench for Systems and Software Engineering
Collaboratively refine requirements into a robust system

• A standards-based practice for the development of complex systems
• across the mechanical, electronic and software disciplines
What is a Workbench?

A Workbench is a combination of products, services and practices designed to accelerate systems and software delivery transformation in a key focus area.

- **Pre-configured and tested** to accelerate transformation
- **Supports different types of focus areas:**
  - A vertical industry (i.e. automotive)
  - A best practice (i.e. Requirements-Driven testing)
  - A technology (i.e. quality management)
- **Supported by best practices guidance and professional services** to accelerate up-take within your environment
- **Incremental adoption**
IBM Customer Success
Hydraulic hybrid delivery vehicles - Eaton & UPS

What’s smart?

- Innovative technology for urban delivery trucks in stop-and-go traffic
- Smart software to optimize energy usage and reduce greenhouse gases

Smarter business outcomes

- 60-70% increase in fuel economy, according to EPA
- 40% reduction in CO₂ emissions

“The suite of Rational tools, including Rhapsody, DOORS, ClearCase and ClearQuest, provides Eaton an integrated software framework that allows us to deliver innovative products more quickly and efficiently.”
The Core Components of the Workbench for Systems and Software Engineering
**Manage Requirements in Context**

*Ensure success by meeting customer needs*

- **Specify the system design** through visualized requirements
  - Iteratively analyze and assess stakeholder needs
  - Link system requirements with the design for coverage and impact analysis
- **Establish traceability throughout development**
  - Analyze impact for every changed requirement
- **Include functional and non-functional requirements**
  - Match performance requirements with physical specifications
Create Your Architecture

Transform requirements into a working system

- **Derive the system** in the context of its environment
  - Reduce confusion over requirements
  - Establish system functionality and its constraints

- **Eliminate errors as they are introduced**
  - Before they are too expensive to find and repair

  - **Simulate often**
    - Animate and execute the design model
    - Validate functionality and verify correctness
  - **Automatically create and execute tests**
    - Derive from the design model or target platform
    - Create test harnesses for unit testing
  - **Manage test cases**
    - Prioritize the features and functions to be tested

Achieve Quality by Design
Recapture Intellectual Property
*Adapt, Reapply and Re-use Technology*

- **Exploit prior designs** to drive business success
  - Understand existing software through visualization and reverse-engineering – determine to use as-is, modify, or apply its architecture to a new design
  - Quit “reinventing the wheel” – maintain a model-based library of design assets
  - Perform trade-off analysis – determine best matches for project requirements

- **Develop and maintain product lines and families**
  - Support rapid, controlled portfolio growth
  - Exploit commonality across ranges of products
  - Focus efforts on unique product variants

Speed

Fuel economy
Implement the System
Create software that matches the requirements

- **Build efficient embedded software** that powers the system
  - Specify and test deployable source code from the system requirements
  - Generate complete C, C++, Java, and Ada applications – including behavior

- **Synchronize between architecture and code**
  - Simultaneously work with the design model, software and target
  - View how a change in any one area is reflected in the others
Apply a United Effort

Maximize efficiency of distributed teams

- **Collaborate** across teams and geographies for any size project
  - Reduce time and risk associated with parallel development
  - Enable integrated design, sharing and review across diverse engineering teams

- Empower a task-based approach to managing complex projects
  - Fully incorporate change and configuration management

- Enhance productivity across teams, disciplines and organizations
  - Shared views
  - Collaborative debugging
  - Linked work items

- Automatically generate reports directly from the design
  - Documentation
  - Regulatory and audit reporting
  - Management, customer and peer reviews
Rational Workbench for Systems and Software Engineering

*Built on a core solution set*

Use modeling to validate requirements, architecture and design throughout the development process

Rational Rhapsody

Manage all system requirements with full traceability across the lifecycle

Rational DOORS

Collaborate across diverse engineering disciplines and development teams

Rational Team Concert

Achieve “quality by design” with an integrated, automated quality management and testing process

Rational Quality Manager

Collaborate

Automate

Report
Summary

- Complexity can rapidly increase as you develop products and systems

- Maintaining the various systems relationships manually is very difficult – maybe impossible

- IBM’s *Workbench for Systems and Software Engineering* automates the building of structures and dependency relationships to:
  - Manage increasing complexity
  - Ensure designs and products meet market demands and industry requirements
  - Perform effective impact and change analysis across different disciplines and subsystem views
  - Enable collaboration across the entire development organization
Thank You

Learn more at:

- IBM Rational software
- IBM Rational Software Delivery Platform
- Process and portfolio management
- Change and release management
- Quality management
- Architecture management
- Rational trial downloads
- Leading Innovation Web site
- developerWorks Rational
- IBM Rational TV
- IBM Business Partners
- IBM Rational Case Studies
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Demonstration Scenario

- Infuze Medical is struggling to bring infusion pumps to market before competitors
  - Testing is taking too long
  - Discovering defects close to release dates, causing teams to scramble at last minute
- Infuze Medical has received warnings from the FDA
  - Company is careful to meet quality guidelines but last minute changes happen
  - Teams tend to take short cuts to meet tight timelines, compromising quality
- Competition is fierce and Infuze Medical can neither afford to be late nor be on time but release a defective product
- Infuze Medical’s CEO was losing sleep and turned to IBM Rational for help
  - Need a smarter development lifecycle to reduce time of Systems and Software test
  - Need to find problems earlier when they are easier to fix
  - Need a way to respond to changes in a safe and effective fashion
- This live demonstration highlights key aspects of the Rational solution for medical device development
Interactions among these team members will highlight integrated capabilities.

1. Requirements Management
2. Model Driven Development
3. Change Management
4. Quality Management
5. Document Generation

Following roles appear in the demo to illustrate development collaboration:

Bob
Product Manager

Scott
Developer

Tanuj
Quality Engineer
Demo Sequence of Events

Bob
(Product Manager)

View requirements

Implement and verify requirement in model

Fix defect

Assess progress

Generate documentation

Scott
(Developer)

Receive notification and execute tests

Submit and assign Defect

Tanuj
(Quality Engineer)

Receive notification and execute tests
Learn more at:

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DOORS Affinity Opportunity

- **If you own DOORS**... or will be purchasing DOORS....
  ....then additional purchase of any of the other products that have a "high affinity" to DOORS qualify for special discounts based on the total purchase price
  - Rational Quality Manager
  - Rhapsody
  - DOORS Web Access
  - Change
  - Rational Publishing Engine
  - Synergy
  - Rational Team Concert
  - Focal Point
  - System Architect

- **If you own any of the other following products**....
  ....then you qualify for discounts on DOORS purchase based on the total purchase price
  - Rational Quality Manager
  - Rhapsody
  - DOORS Web Access
  - Change
  - Focal Point
A Range of Solutions for DOORS Users

IBM® Rational® DOORS® is a well established platform for engineers, allowing to manage project requirements in a flexible environment. SODIUS offers a range of solutions to facilitate the access to DOORS data, the interoperability with other applications and the development of DXL code.

**DXL Editor**

DXL Editor offering unmatched features to facilitate developers' lives. Going far beyond syntax highlighting, the DXL Editor is a real development environment for DXL built on the market-leading Eclipse platform. Last but not least, DXL Editor is available for free. [Learn more about the DXL Editor](#).

**MDConnect for DOORS**

MDConnect for DOORS provides DOORS database navigation in an Eclipse environment and is available for free. Furthermore the RSA Extension interconnects DOORS and Rational Software Architect, facilitating the setup and maintenance of links between requirements and models. Other Extensions will follow, targeting major applications that are used together with DOORS in systems development. [Learn more about MDConnect for DOORS](#).

**MDWorkbench for DOORS**

MDWorkbench for DOORS is a version of SODIUS's framework dedicated to DOORS. This add-on to DOORS brings advanced functionality that helps to architect DOORS databases, to reverse engineer DOORS schemas, to generate documents and to exchange any DOORS information with other environments. [Learn more about MDWorkbench for DOORS](#).
The Rational Rainbow
The IBM Rational Software & Systems Delivery Platform

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<td>Align business goals, best practices and projects for improved productivity and predictability</td>
<td>Model, design and rapidly build resilient architectures for SOA, systems and applications</td>
<td>Ensure software functionality, reliability, security and performance in development and production</td>
<td>Improve effectiveness with process automation, build management, reporting and traceability</td>
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**IBM Software Group | Rational software**

**Telelogic Focal Point**
Decision support solution for Product Management and Product Portfolio Management to analyze customer needs and maximize product value.

**Rational Method Composer** *(formerly Rational Unified Process)*
A flexible process management platform with tooling and the industry’s richest process library to help companies implement effective processes for successful software and IT projects.

**Telelogic Harmony**
Family of domain-specific processes and best practices for building better systems and software.

**Rational Team Unifying Platform**
A cost effective, integrated bundle of many of the tools mentioned in the other disciplines; designed to equip teams with the infrastructure tools, processes, and integrations they need to work together more efficiently.

**Requirements Definition & Management**
Define & manage project requirements for IT and systems development.

**Rational Requirements Composer**
Built on the Jazz platform—a collaborative requirements management solution that enables visualization, organization, and validation of requirements that capture evolving business objectives.

**Telelogic DOORS**
Leading family of solutions for complex requirements management needs for Systems development and complex IT projects.

**Rational RequisitePro**
An integrated solution for authoring and managing requirements and use cases for IT projects.

**Host Tools/Integrations**

**IBM WebSphere Host Access Transformation Services (HATS)**
Solution to transform character-based 3270 and 5250 host applications to web and rich client applications.

**IBM Host Access Transformation Services (HATS) for 3270**
Provides integration between WebSphere applications and system screens or non-WebSphere 3270 applications.

**Footnotes**
Additional bundles of products are available.

**Rational Software Architect**
Advanced Model-Driven Development (MDD) and static analysis for architects / developers creating Service Oriented Architecture (SOA) and portal applications.

**Rational Application Developer**
An IDE for software developers to quickly design, develop, assemble, and deploy SOA, Java, J2EE, and portal applications.

**Rational Business Developer Extension**
A comprehensive IDE for Enterprise Generation Language (EGL)—an easy to learn, rapid development technology that enables any developer to deliver cross-platform web and Service Oriented solutions.

**Telelogic System Architect**
Tool for planning and modeling enterprise architecture, including data architecture, business processes, and IT infrastructure. Includes repository for team access.

**Telelogic Repository**
UML 2.1 and OMG SysML™-based MDD environment for technical, real-time or embedded systems and services.

**Rational Asset Manager**
Solution to create, modify, govern, and locate any type of development assets, including SOA and systems development assets.

**Rational Systems Developer**
An IDE for embedded systems developers that enables software architects to code and integrate via augmented C++ and Java/J2EE applications leveraging UML 2.0.

**Rational Software Modeler**
A UML 2.0-based visual modeling tool for architects, systems analysts, and designers for creating and communicating systems and software specifications.

**Rational Transformation Workbench**
Solution to quickly transform existing core IT assets and discover reusable business logic for creating services.

**WebSphere Studio Asset Analyzer & Rational Asset Analyzer**
Provides insight into dependencies within & among Java™ application components, composite applications that span mainframe and distributed components.

**Rational Developer for System z**
Solution to create and deploy z/OS 2 operating-system-based applications including traditional CICS, IMS, COBOL, PL/I, Web, Web services and XML-based applications.

**Rational Developer for System z**
Integrated development environment for edit/compile/debug of traditional RPG/COBOL/C++-IS applications.

**Telelogic Tau and SDL Suite**
MDD solutions for IT and Systems projects, using SDL (SDL Suite) and UML 2.0 (Tau 2) standards.

**Rational Quality Manager (Express available)**
Built on the Jazz platform—a web-based centralized test management environment for business, system, and IT decision makers and quality professionals.

**Rational Functional Tester**
An automated functional and regression testing tool for testers and developers who need to test Java, VS.NET, Web-based & 3270/5250 composite applications. Add-ons available to support SAP and Siebel.

**Rational Performance Tester**
A performance test creation, execution and analysis tool to validate the scalability and performance of web-based software applications. Add-ons available to support Siebel, SAP, Oracle and C hardship server-based applications.

**Rational Performance Tester for z/OS**
A performance testing tool to test web-based applications and leverage the System z platform for super scalability of the test.

**Rational Tester for SOA Quality**
A functional and regression testing tool to ensure the quality of “GUIless” web services.

**Rational AppScan**
A solution to secure the security and compliance of web applications throughout the software development lifecycle.

**Rational Policy Tester**
Web-based platform for scanning, and reporting on Privacy, Quality and Accessibility compliance issues impacting corporate web properties.

**Rational Manual Tester**
A manual test design and execution tool that promotes test reuse to reduce the impact of software changes on testers and business analysts (includes the System z Functional Tester).

**Rational PurifyPlus**
Runtime analysis tools for improving the reliability and performance of Java or C++ code.

**Rational Test Logix**
A cross-platform solution for component testing and runtime analysis for embedded, real-time, and other types of cross-platform software products.

**Rational Robocast**
An automated functional and regression testing tool for thick client applications (Visual Basic, Oracle Forms, C++, PowerBuilder, etc.).

**Telelogic Logixscope**
Software quality assurance tool that automates code review & detects error-prone modules in C and Java.

**Telelogic Tester**
Systems and integration testing solution using TTCN-3 test language.

**Rational Team Concert (Express available)**
Built on the Jazz platform—a collaborative development environment that integrates source control, work item, and build capabilities to improve software quality and accelerate software delivery.

**Rational ClearCase**
A highly scalable software asset management tool that provides a repository and version control for medium to large projects.

**Rational ClearCase Multisite**
An option to Rational ClearCase to support geographically distributed projects through repository replication.

**Rational ClearCase Change Management Solution Enterprise Edition**
An integrated software configuration management solution for medium to large development projects and/or geographically distributed teams.

**Rational ClearQuest**
A flexible workflow management, defect, test, and change tracking tool for the project life cycle.

**Rational ClearQuest Multisite**
An option to Rational ClearQuest to support geographically distributed projects through repository replication.

**Rational Build Forge (Express available)**
Automated build and release management solution for Rational team builds and project builds on the IBM SCML Advanced Edition for z/OS.

**Version control and build support for the IBM z/OS platform.**

**Rational Software Analyzer**
Solution to automate the detection of code-level errors and identify bugs early in development.

**Telelogic Synergy**
An easy-to-deploy, task-based configuration management solution with support for distributed teams of all sizes.

**Telelogic Change**
A web-based fully integrated change management solution for change request tracking and reporting.

**Rational Project Console**
Project-level metrics tracking and reporting for the Rational tools.

**Telelogic Dashboard**
Project-level metrics tracking and reporting for the Telelogic tools.
DOORS Can Help Build Smarter Products

Innovation for a smarter planet

- Smarter healthcare
- Smarter electronic devices
- Smarter defense systems
- Smarter energy systems
- Smarter hybrid technologies
- Smarter automobiles