



# IBM Rational Software Development Conference 2008

WHERE TEAMS ARE **R-HEROES**



## Using Rational Requirement Tools to Implement Business Driven Development

**Terry Quatrani**  
Rational Evangelist  
tquatrani@us.ibm.com

## Disclaimer

- Though this represents our current direction, these plans are subject to change
- Nothing in this presentation is intended to create any representations or warranties
- IBM Rational warranties are contained in the applicable license agreements



## Agenda

- Overview of Rational's Requirement Strategy
  - ▶ Offering Motivation
  - ▶ Customer Feedback And Market Research
  - ▶ IBM Rational Requirements Definition And Management
  - ▶ Executing the Vision: Requirements Composer
- Questions



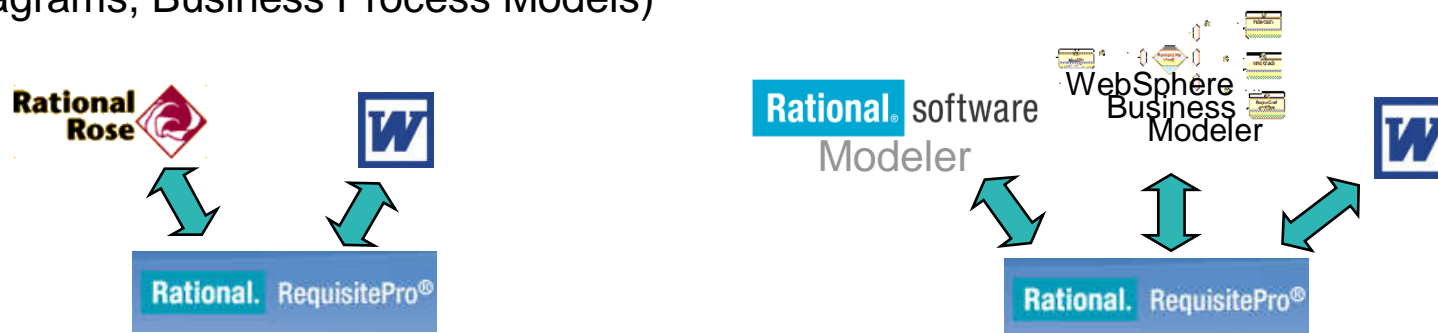
## Agenda

- Overview of Rational's Requirement Strategy
  - ▶ Offering Motivation
  - ▶ Customer Feedback And Market Research
  - ▶ IBM Rational Requirements Definition And Management
  - ▶ Executing the Vision: Requirements Composer
- Questions



## Rational's Requirements Heritage

- For the last decade, Rational has focused on helping Analysts communicate requirements to the delivery team
  - ▶ Advocated text and modeling as a way to elaborate requirements (UC Diagrams, Activity Diagrams, Business Process Models)

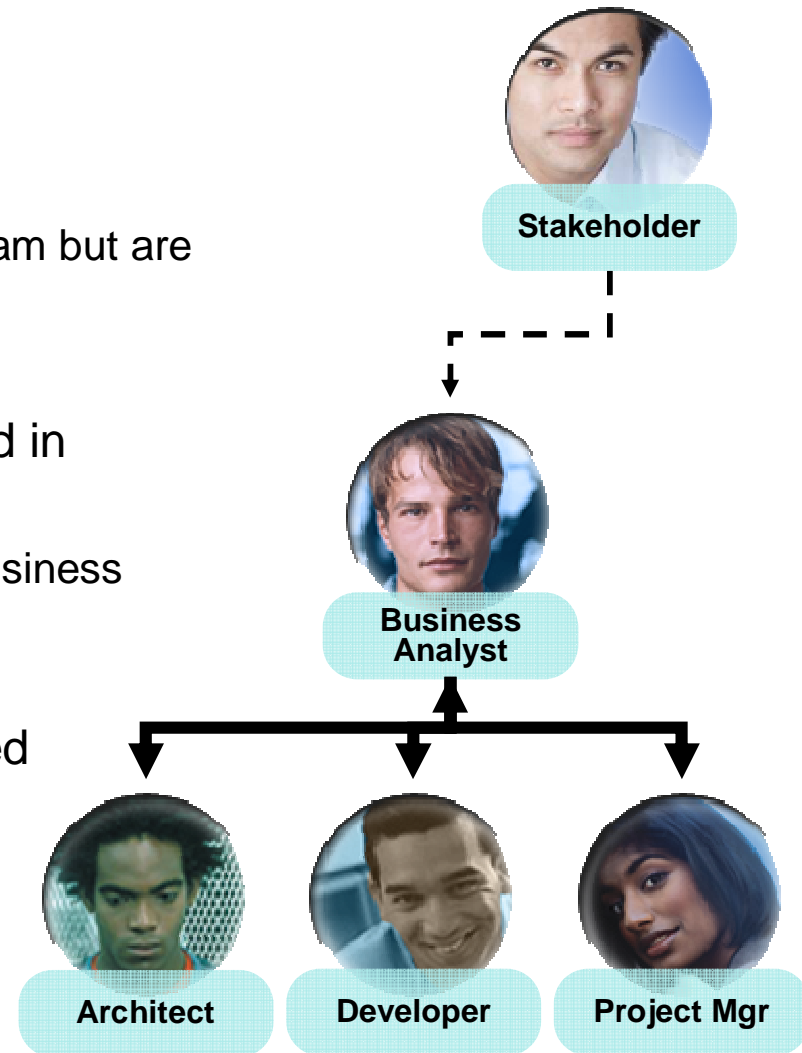


- WBM has recently replaced RSM with many customers
- **RequisitePro as the hub for requirements management and traceability**
- This approach became widely accepted and continues to provide great benefit
  - ▶ Fits well with an iterative development process
  - ▶ Flows well from inception to elaboration



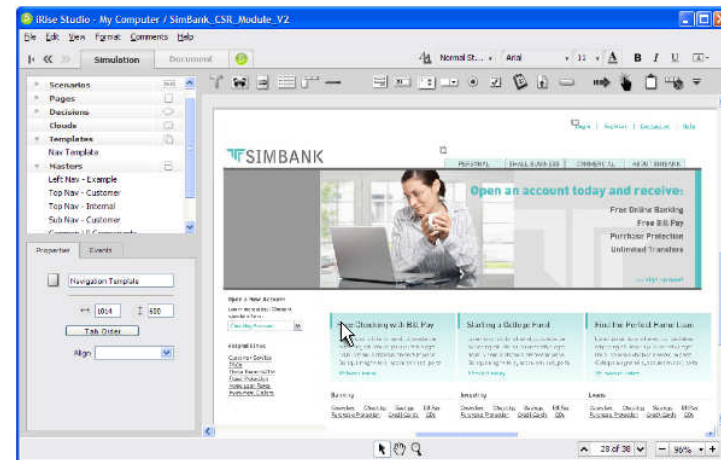
## Areas for Improvement

- Techniques should focus more on clients and stakeholders
  - ▶ Present models communicate to development team but are generally unintelligible to clients / stakeholders
- Practitioners currently need to be highly skilled in modeling
  - ▶ Techniques that are beyond the skills of many business analysts, limits up-take
- Tighter integration between point tools required
  - ▶ Workspace vs. database mismatch
  - ▶ Large footprint, difficult configuration
  - ▶ Performance in WAN environment



# The evolving requirements marketplace

- The marketplace is experimenting with supplements and alternatives
  - ▶ Model things different – “Stories”
    - Wireframes and storyboards of UI
      - **Visio, PowerPoint, Illustrator**
    - Simulations
      - **iRise, ...**
    - Model business processes
  - ▶ Help people get their models right
    - **Ravenflow**'s visual validation from text that describes process flow
  
- General principles
  - ▶ Write less text
  - ▶ Use the vocabulary best suited to communicate your ideas
  - ▶ Enable a larger set of business-oriented people to participate in the RD process
    - Including the clients themselves



129	User ID	Michael Jones	Customer Information
6/20/2004	2:10 PM		Online

Verify or edit the customer's information, then select an existing vehicle or add a new one.

**Customer Information**

Last Name:  First Name:  MI:

Address Line 1:

Address Line 2:

City:   Zip Code:

Country:

Home:  Cell:

Work:  Ext:  Fax:

Email:

**Vehicles Owned**

Vehicle	License	VIN Number	Last Service		
88 Chevrolet Cavalier	FYS-5HH	1234567890123456		Change	Remove
99 Chevy Malibu	OSD-874	2345678901234567	01/15/03	Change	Remove
98 Honda Prelude	NOT URS	5678901234567890	12/28/02	Change	Remove
03 Acura Integra	FDI-9128	0123456789012345	02/12/04	Change	Remove

Customer History F2    Comments F4    Print F5    **1988 Chevrolet Cavalier V6-173cc 2.8L W**

Customer Lookup F7    Vehicle F9    Help F1    Restore F11    Cancel F12    Previous Esc    Next Enter



## Industry Requirements Techniques: *Some Good, Some Not So Good*

- Individual requirements techniques can be useful and successful but...
  - ▶ Most approach the problem from the point of view of individual practitioners (analysts, architects, developers, project managers, etc).
- Techniques sometimes miss the growing need to address ...
  - ▶ Distributed teams and time zones
  - ▶ Collaborative nature of requirements refinement
  - ▶ The web of relationships that exists between ideas, background context and discussions of team members
  - ▶ The organizational processes that intersect with RD
    - For example; creating short-term teams, roles of team members, reviews & approvals, ...
  - ▶ Information overload & the challenge of finding the things that matter

 *We can do better...*





## Rational: In position to lead and innovate in requirements

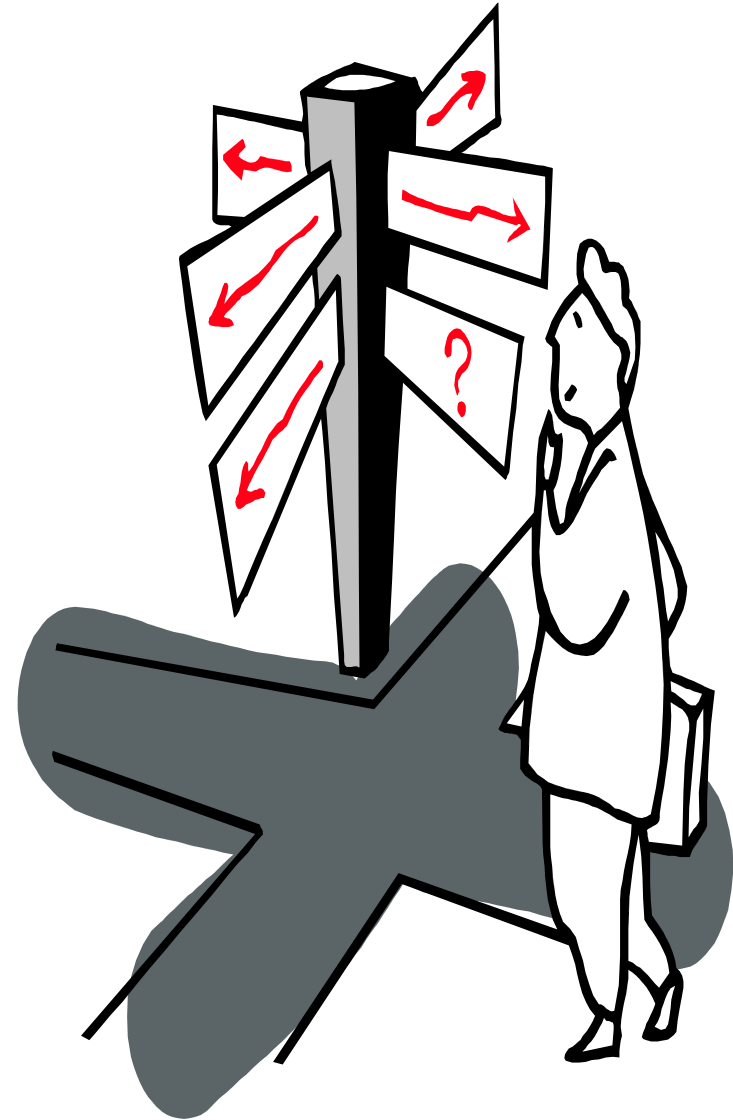
### *Steps to the future...*

1. Improve Requirement Management
  - ▶ Listen to our users
  - ▶ Deliver high priority enhancements (Rational / Telelogic)
2. Complement management with more effective requirements definition
  - ▶ Focus on analyst and stakeholders
  - ▶ Create an open, server based platform for definition
3. Focus on requirements role in Application Lifecycle Management (ALM)
  - Protect integrity of business value through deeper requirements integration in the software development lifecycle



## Motivations for doing more

- Requirements are important to our customers
  - ▶ Doing more with less, faster, more important than ever
  - ▶ Gaps in shared understanding between business and IT
  - ▶ Uncertainty, driven by perception, knowledge, and communication gaps during the requirements process
- Effects that drive project failure and cost
  - ▶ Poorly defining the problem
  - ▶ Poorly defining a solution
  - ▶ Poorly managing change
- There are opportunities to better address business-driven development beyond what today's Requirements Management (RM) tools can do
  - ▶ More focus on discovering requirements in the first place
  - ▶ Do more to help validate requirements
  - ▶ Support specification techniques beyond text-based



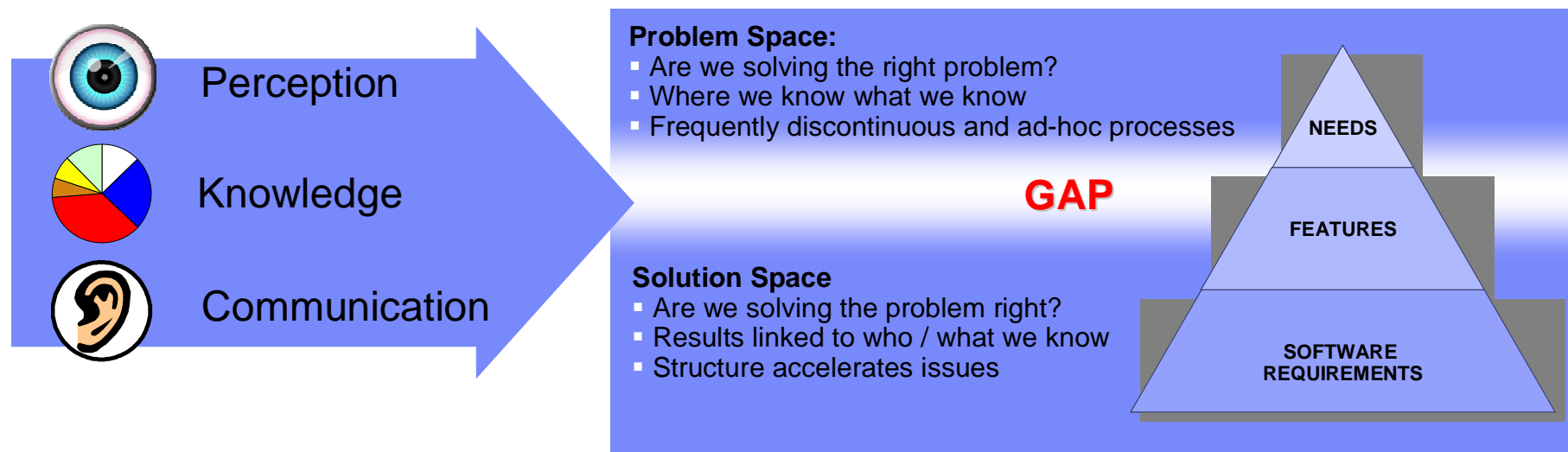
## Agenda

- Overview of Rational's Requirement Strategy
  - ▶ Offering Motivation
  - ▶ Customer Feedback And Market Research
  - ▶ IBM Rational Requirements Definition And Management
  - ▶ Executing the Vision: Requirements Composer
- Questions



## Customer Feedback And Market Research

- Requirements are ubiquitous and continue to be labor-intensive. We need to evolve our approach to requirements.
- Business customers are conflicted about requirements. They want more confidence and correctness in requirements, but also more efficiency in the definition process.
- Improving the requirements definition process offers more ROI than incrementally better requirements management for many organizations
- IDC finds that 80-plus percent of software development failures result directly from poor requirements definition, gathering, management, and analysis.
- Need to improve business/IT communication



## Agenda

- Overview of Rational's Requirement Strategy
  - ▶ Offering Motivation
  - ▶ Customer Feedback And Market Research
  - ▶ IBM Rational Requirements Definition And Management
  - ▶ Executing the Vision: Requirements Composer
- Questions



# IBM Rational Requirements Definition And Management

## Our vision for Requirements Definition and Management (RDM)

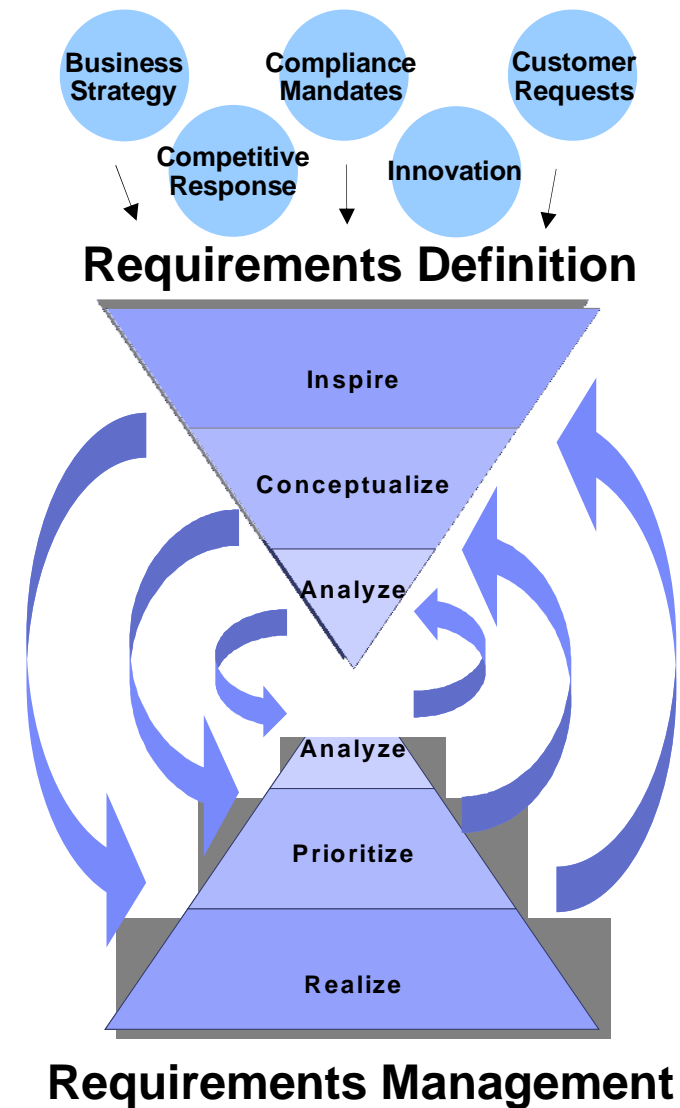
There is a natural progression in the lifecycle of requirements from:

- Accumulated to organized
- Ambiguous to precise
- Approved to implemented
- Implemented to validated

**We will foster natural, real-time, contextual, focused collaboration using various techniques, vocabularies, and types of documents.**

Enabling better project outcomes through

- Improved definition, validation and management
- More effective communication among business/client stakeholders & IT delivery teams wherever they are located
- More effective use of requirements across the development lifecycle
- Less project rework, faster project execution and lower-cost delivery



# Requirements Management – RequisitePro

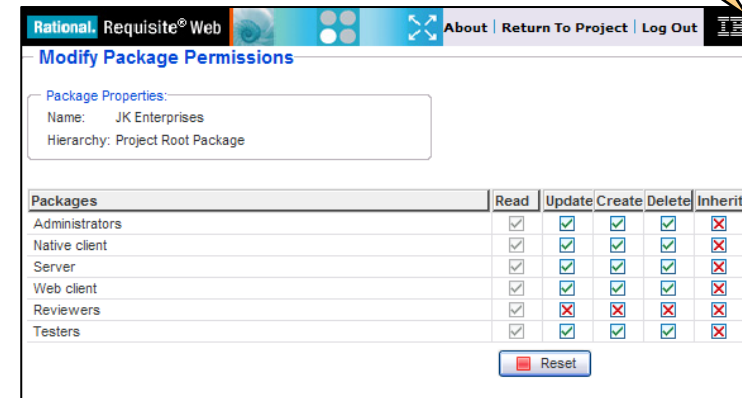
**Version 7.1 Open Beta Now, Available Q4 2008**



IMPROVED

## Key Benefits for Version 7.1

- Secure and managed requirement repository
- Robust Web interface to serve globally distributed teams with ease
- Powerful database infrastructure for filtering and reporting
- Application Lifecycle Management (ALM) integrations
- Administer projects using the web client

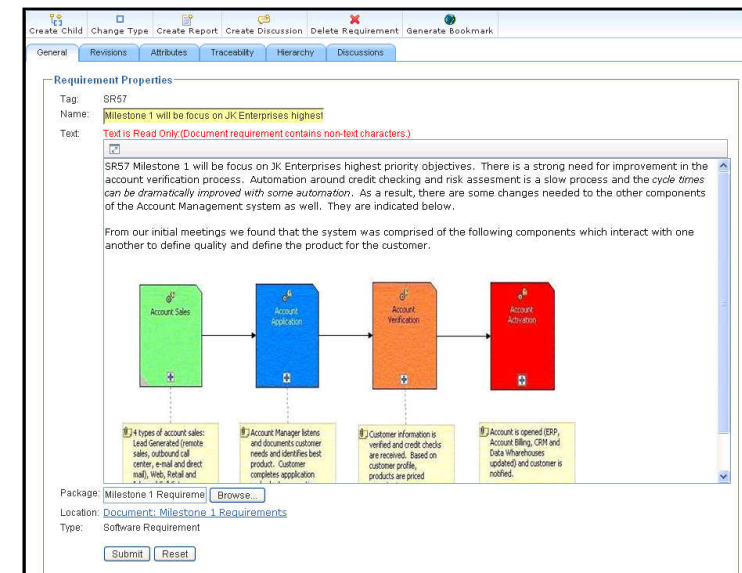


**Rational Requisite® Web** About | Return To Project | Log Out

### Modify Package Permissions

Package Properties:  
Name: JK Enterprises  
Hierarchy: Project Root Package

Packages	Read	Update	Create	Delete	Inherit
Administrators	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Native client	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Server	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Web client	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Reviewers	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Testers	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>



Create Child | Change Type | Create Report | Create Discussion | Delete Requirement | Generate Bookmark

General | Revisions | Attributes | Traceability | Hierarchy | Discussions

### Requirement Properties

Tag: SR57  
Name: Milestone 1 will be focus on JK Enterprises highest  
Text: Text is Read Only (Document requirement contains non-text characters.)

SR57 Milestone 1 will be focus on JK Enterprises highest priority objectives. There is a strong need for improvement in the account verification process. Automation around credit checking and risk assessment is a slow process and the cycle times can be dramatically improved with some automation. As a result, there are some changes needed to the other components of the Account Management system as well. They are indicated below.

From our initial meetings we found that the system was comprised of the following components which interact with one another to define quality and define the product for the customer.

```

graph LR
    A[Account Sales] --> B[Account Application]
    B --> C[Account Verification]
    C --> D[Account Activation]
  
```

Package: Milestone 1 Requirement | Browse...  
Location: Document: Milestone 1 Requirements  
Type: Software Requirement

Link From [www.ibm.com/software/rational/offerings/irm/](http://www.ibm.com/software/rational/offerings/irm/)







## RequisitePro 7.1 Open Beta

Available **Now** on IBM.com

[www.software.ibm.com/iwm/web/cc/earlyprograms/rational/RDMOpenBeta/index.shtml](http://www.software.ibm.com/iwm/web/cc/earlyprograms/rational/RDMOpenBeta/index.shtml)

Or link from the Requirements Management Page

<http://www.ibm.com/software/rational/offerings/irm/>

© Copyright IBM Corporation 2008. All rights reserved. The information contained in these materials is provided for informational purposes only, and is provided AS IS without warranty of any kind, express or implied. IBM shall not be responsible for any damages arising out of the use of, or otherwise related to, these materials. Nothing contained in these materials 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. References in these materials to IBM products, programs, or services do not imply that they will be available in all countries in which IBM operates. Product release dates and/or capabilities referenced in these materials may change at any time at IBM's sole discretion based on market opportunities or other factors, and are not intended to be a commitment to future product or feature availability in any way. IBM, the IBM logo, the on-demand business logo, Rational, the Rational logo, and other IBM products and services are trademarks of the International Business Machines Corporation, in the United States, other countries or both. Other company, product, or service names may be trademarks or service marks of others.





## Agenda

- Overview of Rational's Requirement Strategy
  - ▶ Offering Motivation
  - ▶ Customer Feedback And Market Research
  - ▶ IBM Rational Requirements Definition And Management
  - ▶ Executing the Vision: Requirements Composer
- Questions



# IBM Rational Requirements Composer

***Open Beta Now, Available 4Q 2008***



## Rich Authoring Environment

**Rich Text Requirements**

**Use Cases**

**Glossaries**

**UI Sketching and Storyboarding**

**Process Sketching**

## Web Review and Approval

- Wiki style interface
- Categorize / Tag
- Comment
- Review / Approve



- Share work instantly
- Users / teams / authorizations
- Linking between all artifacts
- Versioning

**Rational. RequisitePro**

- Integrate requirements across the application lifecycle

[www.ibm.com/software/rational/announce/rrc/](http://www.ibm.com/software/rational/announce/rrc/)



## Visualize Investments Before Committing Resources

- **Improved requirements definition, validation and management of change through the software development lifecycle**
  - ▶ Reduce risk by eliciting and interconnecting ideas that clarify actual business issues, enabling more effective solutions.
  - ▶ Integrates with RequisitePro to make use of requirements across the lifecycle
- **More and clearer collaboration among business stakeholders & IT delivery teams wherever they are located**
  - ▶ Gain Consensus quickly using sketches, storyboards, use cases, and glossaries to remove confusion and build consensus
  - ▶ Collaborate between stakeholders and teams online and real-time for faster iterations, quicker decision making and sign-off.
- **Less project rework, faster project execution and lower-cost delivery**
  - ▶ Get teams up to speed with a rich history to reduce rework, and meetings focused on building context
  - ▶ Allow teams to reuse requirements artifacts on future projects.

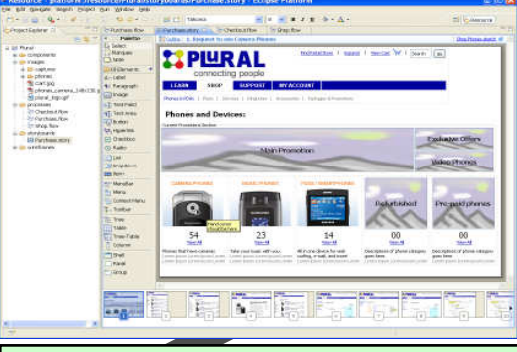
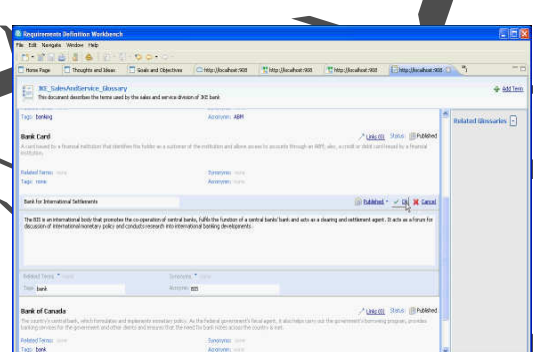
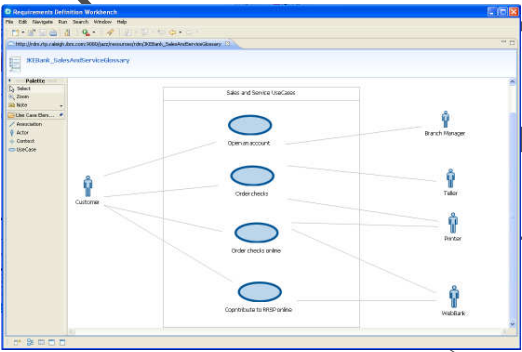
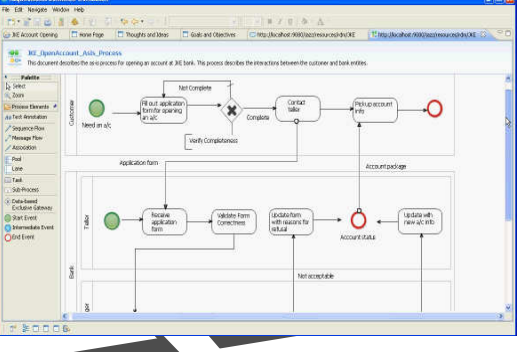
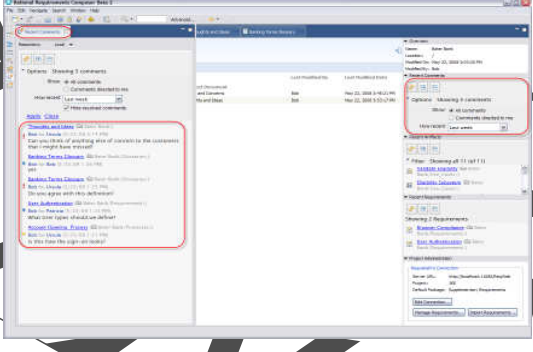
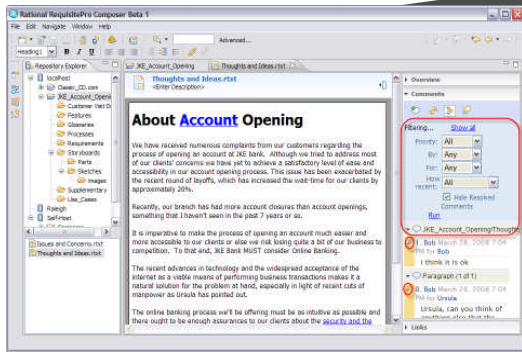


# Transform your Web of Information into requirements knowledge

Use **Rich-text** to capture and structure information (text, links, images, emails)

**Collaborate** between Teams and stakeholders in real-time, to quickly achieve sign-off.

Model the Proposed Future State with **Business Process sketches**



Build **Use case models** and Elaborate on the Processes, Actors and Activities

Define and reuse terminology with **Shared Glossaries**

Visualize User Scenarios with **UI Sketches and Storyboards**



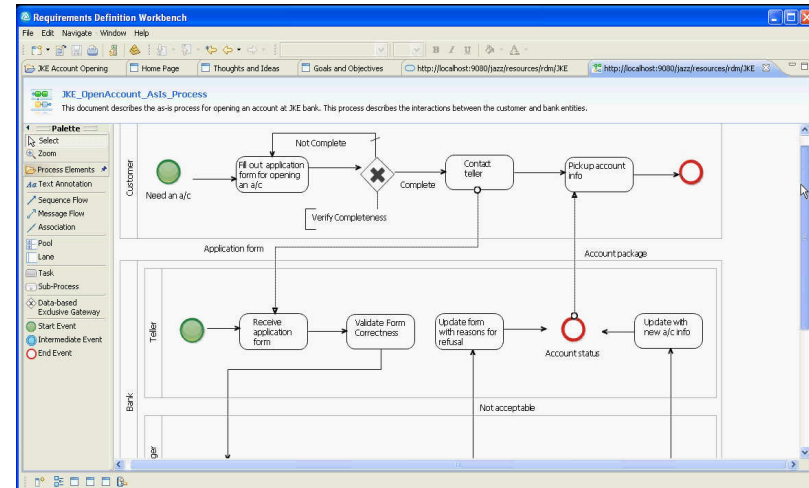




# Requirements Composer – Capabilities

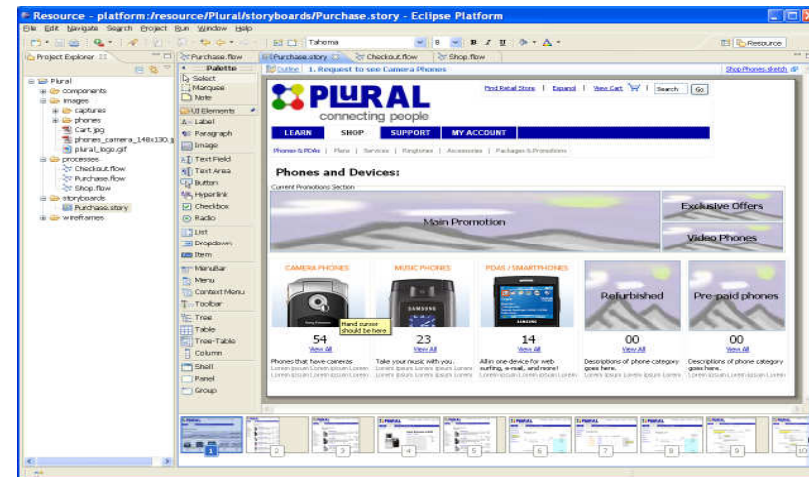
## Business processes

- Sketch current and future business processes
- Link business processes to business goals and objectives
- Link tasks and decision points to:
  - UI sketches to tasks
  - Use cases to tasks
  - Business rules to decision points



## UI sketches and storyboards

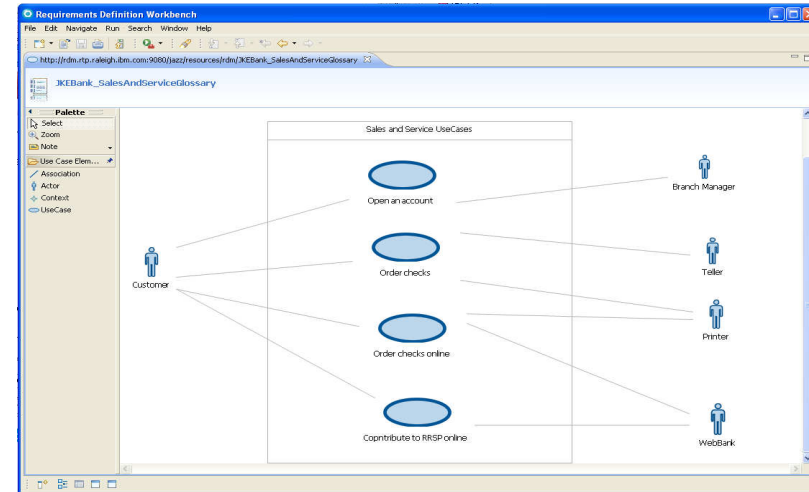
- Elicit and validate user experience requirements
- Quickly assemble UI storyboards
- Easily update storyboards over project iterations
- Create reusable interface assets
- Provide end-to-end user experience reviews
- Link any element to almost anything



# Requirements Composer – Capabilities

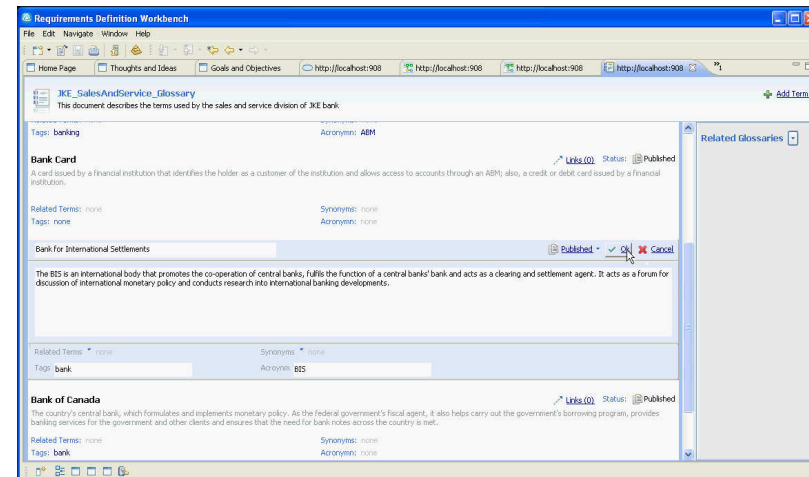
## Use Cases

- Create informative diagrams
- Elaborate with rich document descriptions
- Link use cases with:
  - ▶ UI sketches and storyboards
  - ▶ Process sketches
  - ▶ ...



## Glossaries

- Terminology definition to promote consistency, clarity and correctness
- Link glossary terms to any textual content
- Maintain and reuse multiple glossaries
  - ▶ Enterprise, project, client
  - ▶ Industry-specific
- Synonyms, related terms, search, more...







# Requirements definition platform

*Enhanced by our partners*



- Define, elicit and validate requirements through visual simulations
- Include iRise simulations in the Requirements Composer web



- Rational AppScan (Security)
- Rational Policy Tester (Compliance)
- Functional Tester
- Performance Tester
- Software Analyzer
- SOA Tester

## RAVENFLOW

- Validate and find missing requirements
- Generate visual models from textual use cases to aid understanding
- Include RAVEN artifacts in the Requirements Composer web

Requirements-driven software quality

*Enhanced by QM tools & practices*



## IBM acquires Telelogic, April 3<sup>rd</sup>, 2008

- “Telelogic will report into the IBM Rational Software unit. Consistent with IBM’s Software strategy,

Telelogic clients' and partners' investments in existing IBM and Telelogic technologies will be preserved, allowing customers to take advantage of the broader set of capabilities without the need to replace existing systems.”

- [www.ibm.com/software/rational/welcome/telelogic/press.html](http://www.ibm.com/software/rational/welcome/telelogic/press.html)

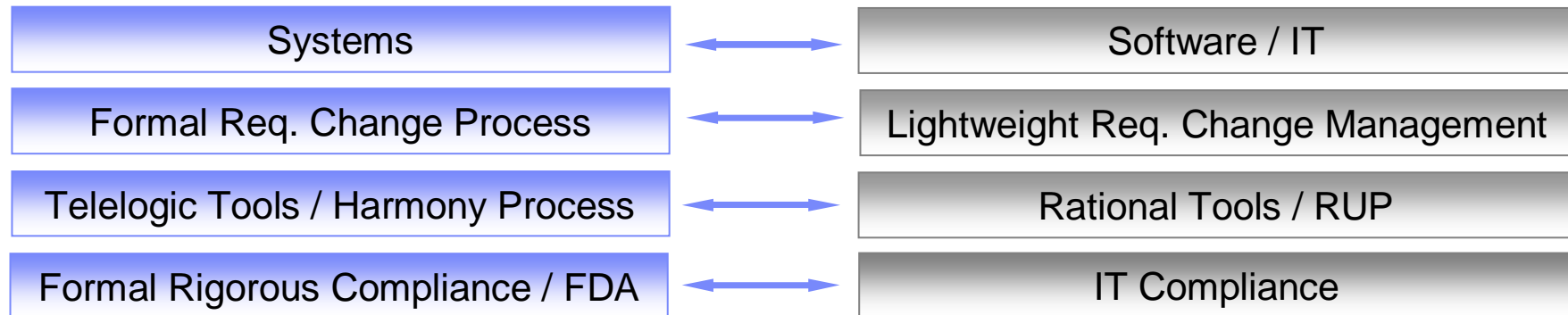


# Complementary requirements solutions

*One Size Does NOT Fit All ... IBM remains committed to both*

## DOORS

## RequisitePro



*Successful projects using DOORS or RequisitePro tend to have the characteristics shown above*



# Coming in 2009: Composer integration with DOORS

## Rich Authoring Environment

**Rich Text Requirements**

**Use Cases**

**Glossaries**

**UI Sketching and Storyboarding**

**Process Sketching**

## Web Review and Approval

- Wiki style interface
- Categorize / Tag
- Comment
- Review / Approve



- Share work instantly
- Users / teams / authorizations
- Linking between all artifacts
- Versioning



## Overall Strategy

- Delivering significant requirements tools in 2008
  - ▶ RequisitePro 7.1
  - ▶ Requirements Composer
  - ▶ DOORS 9.0 & 9.1
- Rational is committed to both Rational & DOORS products
- Jazz technology
  - ▶ Bring RequisitePro and DOORS together over time
  - ▶ Helps solves long standing RM problems
  - ▶ Enables better ALM integrations

Requirements  
Composer  
Open Beta  
Available **Now**  
on **IBM.com**





## Requirements Composer Open Beta

Available **Now** at

[www.ibm.com/software/rational/announce/rrc/](http://www.ibm.com/software/rational/announce/rrc/)

Or link from the Requirements Management Page

<http://www.ibm.com/software/rational/offerings/irm/>

© Copyright IBM Corporation 2008. All rights reserved. The information contained in these materials is provided for informational purposes only, and is provided AS IS without warranty of any kind, express or implied. IBM shall not be responsible for any damages arising out of the use of, or otherwise related to, these materials. Nothing contained in these materials 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. References in these materials to IBM products, programs, or services do not imply that they will be available in all countries in which IBM operates. Product release dates and/or capabilities referenced in these materials may change at any time at IBM's sole discretion based on market opportunities or other factors, and are not intended to be a commitment to future product or feature availability in any way. IBM, the IBM logo, the on-demand business logo, Rational, the Rational logo, and other IBM products and services are trademarks of the International Business Machines Corporation, in the United States, other countries or both. Other company, product, or service names may be trademarks or service marks of others.





# QUESTIONS







# 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 Rational Business Partners](#)

© Copyright IBM Corporation 2008. All rights reserved. The information contained in these materials is provided for informational purposes only, and is provided AS IS without warranty of any kind, express or implied. IBM shall not be responsible for any damages arising out of the use of, or otherwise related to, these materials. Nothing contained in these materials 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. References in these materials to IBM products, programs, or services do not imply that they will be available in all countries in which IBM operates. Product release dates and/or capabilities referenced in these materials may change at any time at IBM's sole discretion based on market opportunities or other factors, and are not intended to be a commitment to future product or feature availability in any way. IBM, the IBM logo, the on-demand business logo, Rational, the Rational logo, and other IBM products and services are trademarks of the International Business Machines Corporation, in the United States, other countries or both. Other company, product, or service names may be trademarks or service marks of others.

