

Innovate2011

The Rational Software Conference

11th and 12th of October

Let's **build** a smarter planet.



Design and Construction Update

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Architecture Management team



Summary

Developer tooling

Modelling

Design Management



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Software. Everywhere.

Developer tooling

IBM Rational Application Developer for WebSphere Software (RAD)

Tied to WebSphere Application Server and Portal release

Supports WAS/Portal *supported* versions

Tied to Eclipse releases



RAD v8.0.3

Eclipse 3.6-based

WAS unit test environment v6.0, v7.0, v8.0

Portal test environment v6.1 and v7

J2EE 1.2/3/4, EE5 and EE6

Test clients for EJB/Web Services

Cloud tooling (build *for* the cloud)

IBM Workload Deployer



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Modelling

Why do we build models?

Rational Software Architect Family

UML 2.x



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Software. Everywhere.



Rational Software Architect Family

Deployment Automation
Content Pack for
RAFW and WAS



Extension for
Deployment Automation
Planning



Extension for
Deployment Planning

Extension for
Integrated
Architecture
Frameworks

Extension for SOA
and WebSphere

Rational Application
Developer
Standard Edition

Extension for
Communication
Applications

Extension
for C++

Simulation
Toolkit

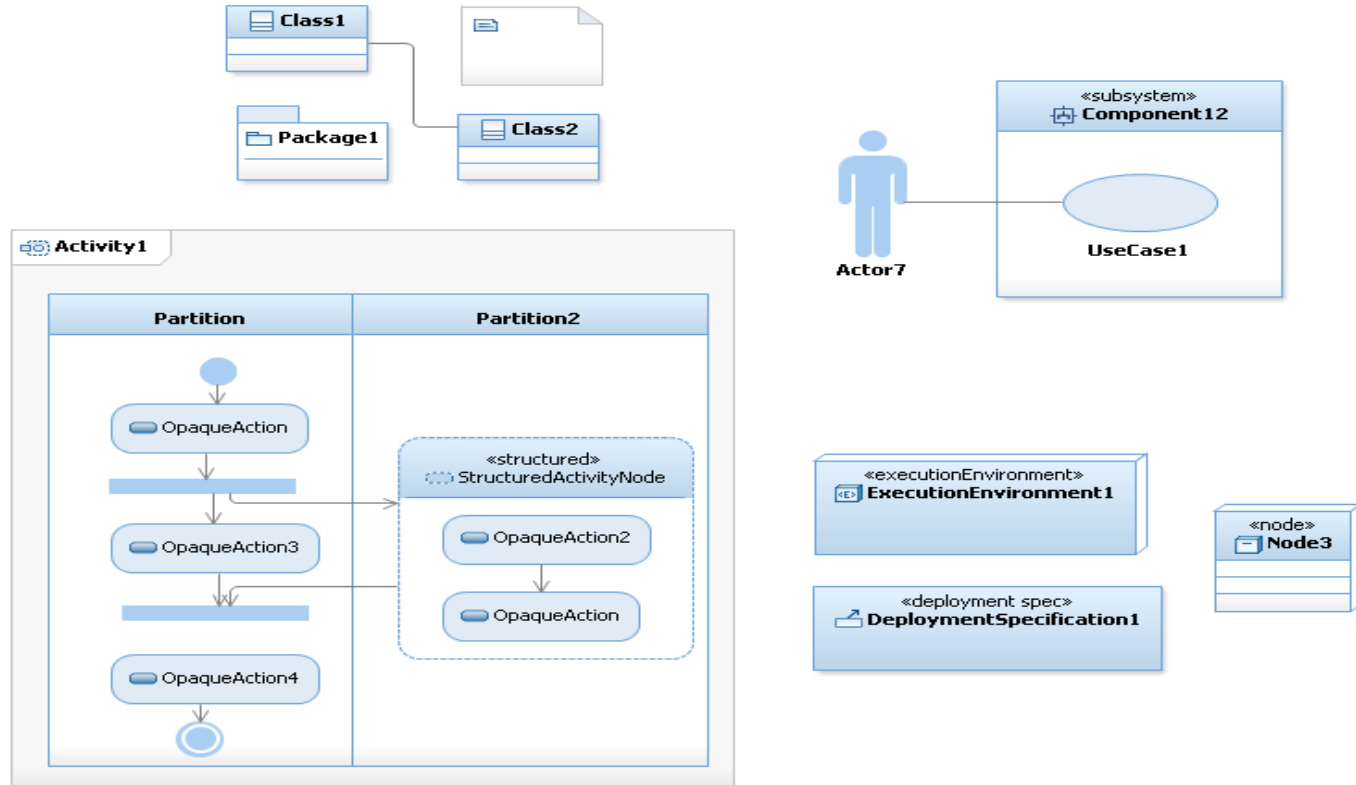


**Rational Software Architect
Core foundation**

- Sketching
- UML 2.2 modeling support
- Requirements integration with end to end traceability

- Built in transformations for Java, C#, VB.NET
- Cloud support

New Appearance



Layers

Show/hide layers to simplify diagrams without deleting elements or creating new diagrams

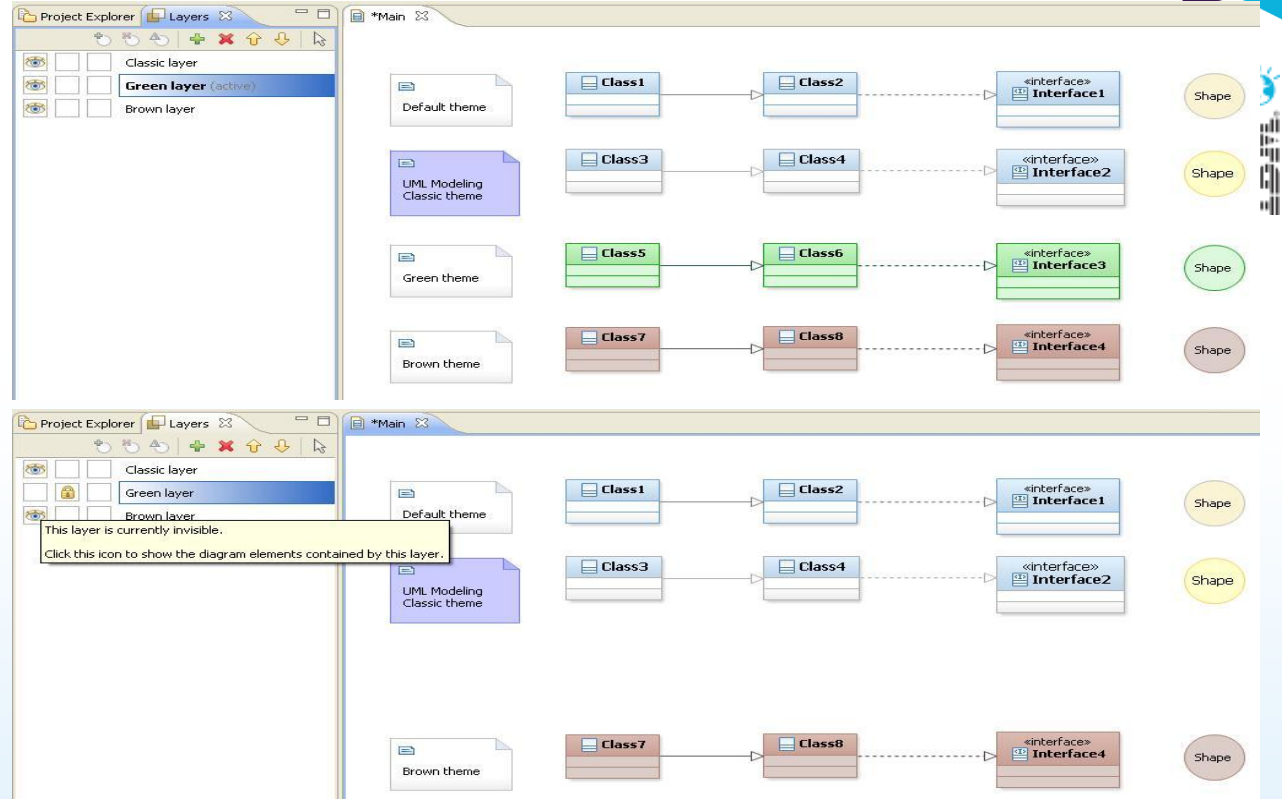
Locking / unlocking layers to prevent editing

Selecting all elements on layer quickly

Reordering layers to reorder the z-order of shapes

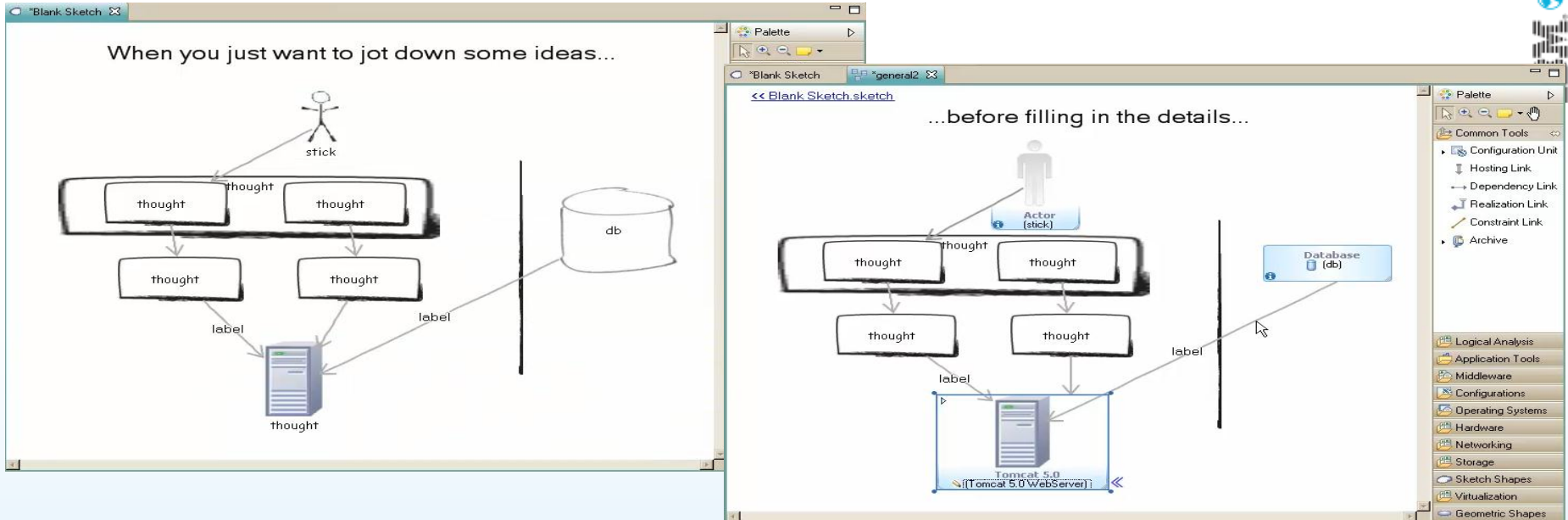
Highlighted layer is currently active and new elements are automatically added there.

Content of a layer can be changed.





Agile sketching with incremental formalization



- Quickly capture thoughts – work at “think speed”
- Selectively formalize as semantic model elements
- Extend this “actionable whiteboard” across space and time

BPMN

BPMN support added into RSA

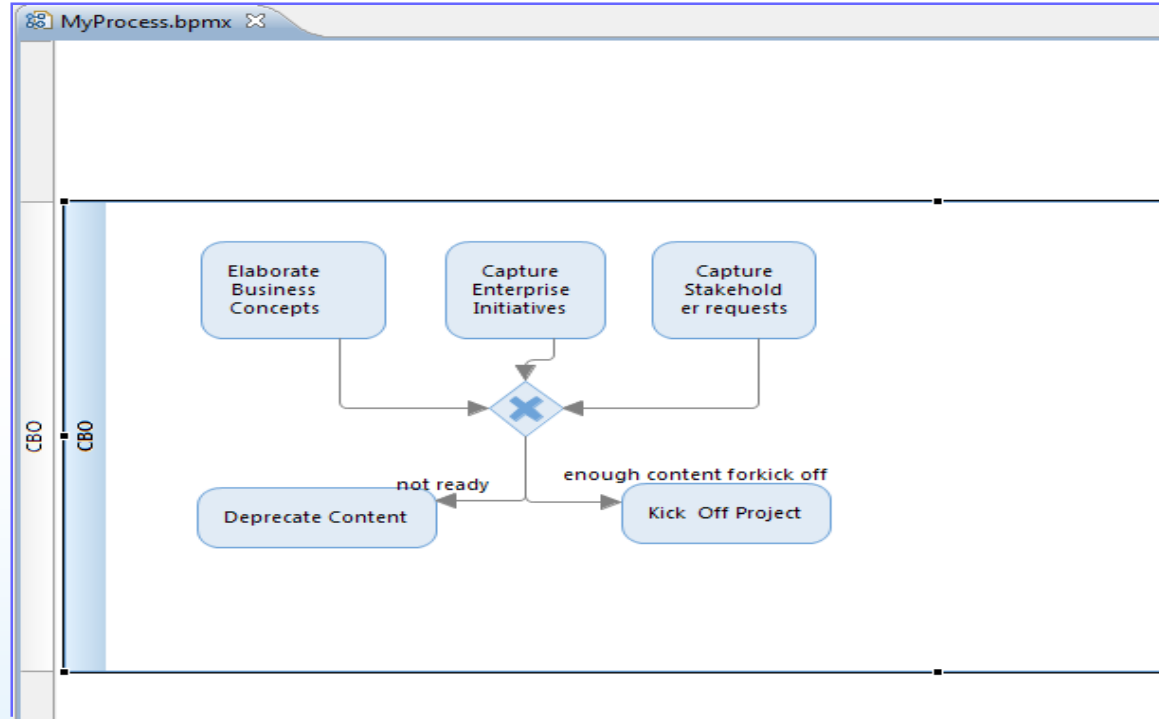
Provides context for other models

BPMN2 interchange supported

- Can bring process models in from other sources

Can use model in SOA transforms

Can simulate BPMN models as well



Metrics

Analysis

Create, manage, and run configurations

Select a range of inputs from the scope tab and at least one rule from the rules tab to create an analysis configuration.

Name: New_configuration

type filter text

Analysis

New_cor

Rule Sets:

Set Import... Export...

Analysis Domains and Rules

- Model Metrics For UML [19/19]
 - Coupling [2/2]
 - Number of association relationships involving classifiers
 - Number of association relationships involving classifiers
 - Inheritance [8/8]
 - Depth of a classifier in its inheritance hierarchy
 - Number of ancestors of a classifier
 - Number of attributes a classifier inherits
 - Number of attributes a classifier overrides
 - Number of descendants of a classifier
 - Number of interfaces a class implements
 - Number of operations a classifier inherits
 - Number of operations a classifier overrides
 - Size [9/9]
 - Number of attributes in a classifier
 - Number of classes in a package
 - Number of classes in a package and its subpackages
 - Number of interfaces in a package
 - Number of operations in a classifier
 - Number of operations in the classes of a package
 - Number of operations with a name starting with "get", "is" or "has"
 - Number of operations with a name starting with "set"
 - Number of public operations in a classifier

Properties

- Analyze Reference Resources
- Analyze Closed Resources

Apply Revert

Analyze Close

Filter matched 2 of 21

Model Metrics for UML | Model Review for UML

Rule	Metric
Inheritance	
Number of ancestors of a classifier	
/uml/A.emx	0.5
A	0.5
A	0
Class1	2
Package1	
/uml/B.emx	0.0
/uml/C.emx	0.0
/uml/D.emx	0.0
/uml/E.emx	0.0
/uml/F.emx	0.0
/uml/G.emx	0.0
/uml/H.emx	0.0
/uml/I.emx	0.0
/uml/J.emx	0.0
Number of descendants of a classifier	0.0
Size	
Number of attributes in a classifier	
Number of operations in a classifier	

UML Model Metrics Problem Results

Rational software

Page: 1

UML Model Metrics Results

May 28, 2007 4:59 AM

Inheritance

- Number of ancestors of a classifier
 - Resource: /uml/A.emx
 - A
 - A:Class1
- Number of descendants of a classifier
 - Resource: /uml/E.emx
 - E
 - E:Class3

Size

- Number of attributes in a classifier
 - Resource: /uml/A.emx
 - A
 - A:Class1
 - Resource: /uml/B.emx
 - B
 - B:Class2
 - Resource: /uml/E.emx
 - E

A	0.5
A:Class1	2
E	1.0
E:Class3	2
A	4.0
A:Class1	2
B	2.0
B:Class2	2
E	2.0

Design Manager

What problems do you want to solve?

Hard to get meaningful feedback

Lack of traceability

Hard to assess impact of change

Hard to link to other tooling

Can't report across the lifecycle

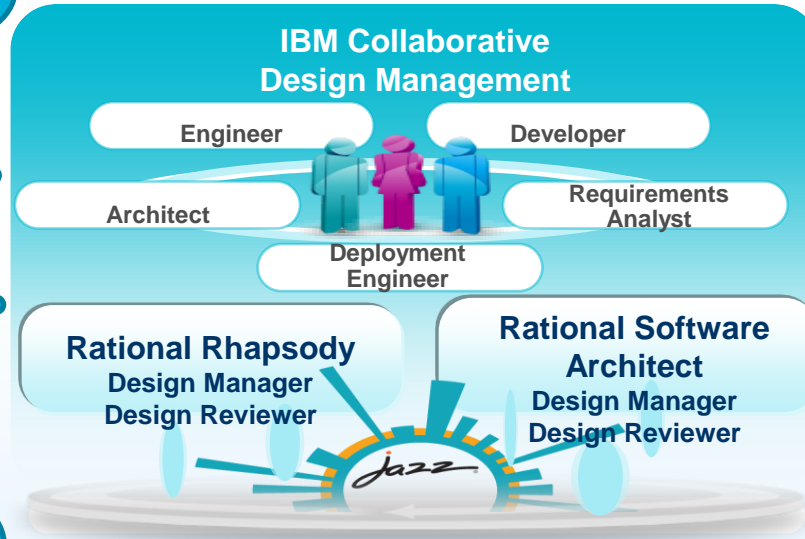


Rational Design Manager

Centralised design repository

Improved collaboration with commenting and review

Lifecycle linking to work items and requirements



Multi-discipline document generation

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Web Browser for models



The screenshot displays the IBM Rational Requirements Manager (RRM) web browser interface. The main window title is "JKE Banking" and the user is logged in as "jke.cobolier". The interface is divided into several sections:

- Snapshot:** Shows "No associated comments".
- Recently Viewed:** Lists "Main" and "Main".
- Explorer:** A tree view showing the project structure, including "req.scm components.com", "req.scm system_", "Navigators", "system_", "Design", "components", "UC Realizations", and "Specification".
- 8846: Main:** The main content area showing a requirement model. It includes a "Diagram" tab, "Properties", "Related Comments", and "Links" tabs. The "Links" tab is active, showing a list of links with details for a selected link.
- Comments (2 of 2):** A list of comments, with one visible: "Where does logging come in (1) to avoid a simple comment (2)".

The selected link details are as follows:

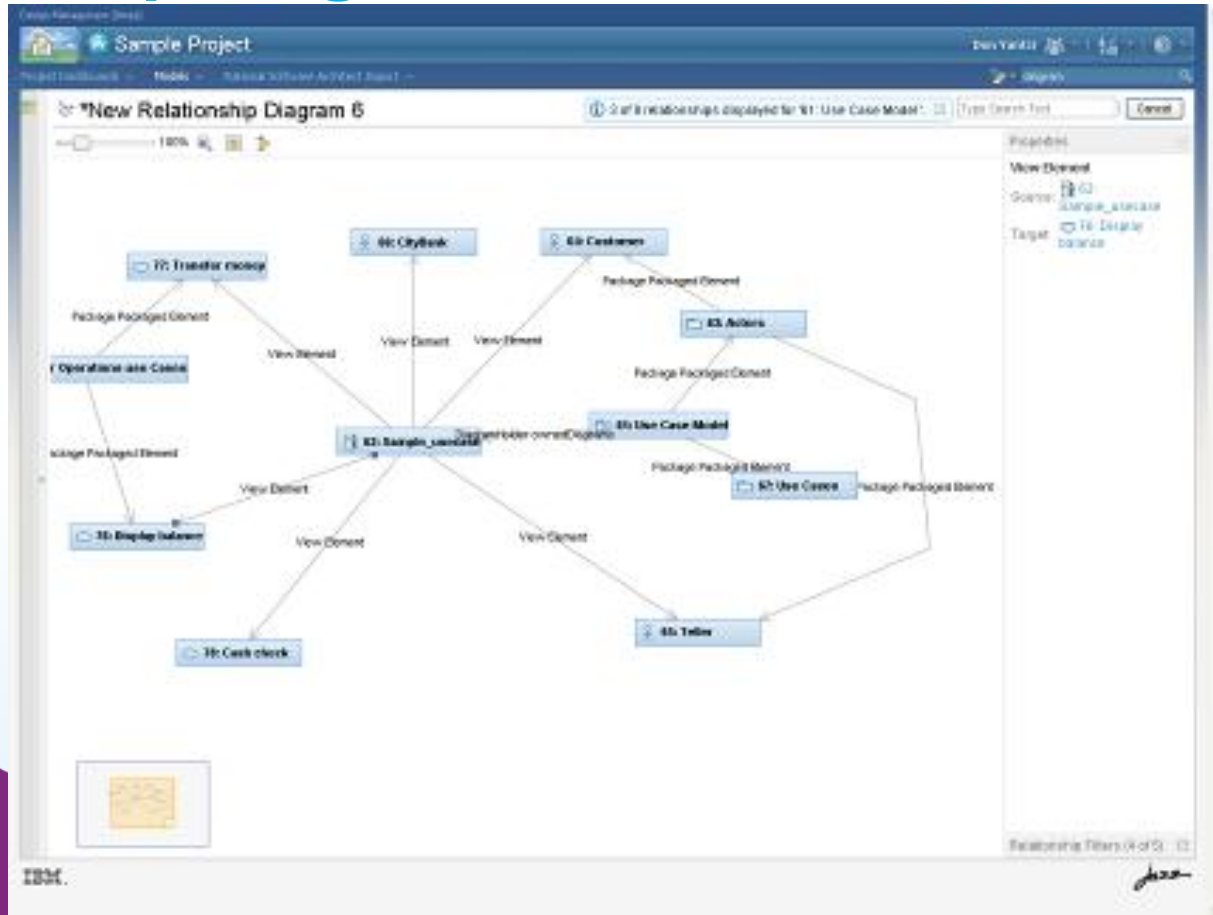
- ID:** 12: Donors can choose to support an organization
- Description:** Requirement: Donors Can Choose to Support an Organization Brief Description: Donors should have the ability to choose an organization to support with Dividends for a Cause, applicable Roles =R
- Location:** JKE Business Recovery Staff's (Requirements) > Features > Release 1
- Attributes:**

Type	Feature	Format	Test
Description: Business Priority	High	Status: Stable	Accepted Medium
- Links:**

Link To (2): 28, 38	Link From (2): 23, 41
Created by (1): BT	Modified by (1): BT
Embedded in (1): 55	Statified by (2): 55, 57
Statified (2): 45, 74	



Relationship diagram



Comments/Annotations

The screenshot displays the IBM Rational Software Architect interface for a project named "JKE Banking". The main workspace shows a UML diagram titled "BB46: Main" with a zoom level of 100%. The diagram includes several components: "ControlApp", "DatabaseApp", "GeneralizedApp", and "WebApp". A red arrow points from the "ControlApp" component to a red-bordered comment box. The comment box contains the text: "Where does logging come in (T) (T) mind. We wanted to think up. Can we add the components necessary for logging in this day so?". The right-hand side of the interface features a "Comments (2 of 2)" panel, which lists the comment and provides options to "View" or "Delete" it. The IBM logo is visible in the bottom left corner of the application window.



Links back to plans

Project: Dashboards ▾ Work Items ▾ Plans ▾ Source Control ▾ Builds ▾ Reports ▾ Search Work Items

BRM Sprint 2 (1.0) Plan

26 items: 26 open, 0 closed | Ended on: Jul 11, 2011

Plan Details [Edit](#)

Planned Items [Links](#) [Snapshots](#) [Dashboard](#) [Notes](#)

View As: Traceability

Actions	Summary	Implements Requirement	Elaborated by Architecture Element
	Widget Disposed Exception		
	Improve link colors	..	..
	Donor Dividend Allocation Criteria		..
	Performance on first startup is bad	..	..
	SWT Exception	..	..
	Frequency of dividend transfer		..
	Requests sent in form of email		..
	Organization must identify how much money is		..
	Organizations may apply with an initial request		..
	Customers can nominate an organization for th		..
	Organization must provide justification for why fi		..
	Organizations can apply		..
	JKE Charity Coordinator will respond to request		..
	Browser Exception	..	..
	Some messages are not externalized	..	..
	Meetings are too long	..	..
	Implement server logging		
		123: Log server activity	JKE Overview

Collaborative Design Management User Roles

Rational Software Architect Design Manager 3.0



Design Reviewer

For extended team members who need to access and collaborate on models and designs

Design Manager

For design practitioners using RSA or Rhapsody to create models and designs

	Design Reviewer	Design Manager
View and search designs	✓	✓
Attach comments and markup	✓	✓
View designs in dependency diagram	✓	✓
View and create design links	✓	✓
Dashboards	✓	✓
Import designs directly from RSA or Rhapsody workspace		✓
Import designs from SCM		✓
Setup design reviews		✓
Create design baselines		✓

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Links

RAD v8

<http://www-01.ibm.com/software/awdtools/developer/application/features/index.html>

http://www.redbooks.ibm.com/abstracts/sg247835.html?Open=&cm_sp=MTE17848

RSA v8

<http://www.ibm.com/software/awdtools/swarchitect/>

Design Manager 3.5 M1 (Domain modeling)

<http://youtu.be/9YIboUoBZwl?hd=1>





www.ibm/software/rational

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