

Supporting IBM/Rational Tools and Technologies

www.trinity-software.com "All Ways Rational"

1

Overview Of Trinity Enterprise CM with ClearCase and ClearQuest Trinity's Asset Library Service Offerings Q&A

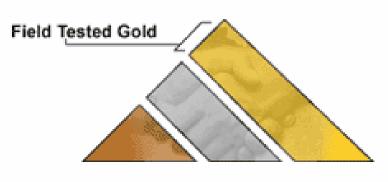
Overview Of Trinity

- Trinity Software Solutions has been a Rational consulting and training partner for over 5 years.
- Trinity Software focuses on providing customers comprehensive *training*, *mentoring*, *consulting* and *support services* centered around the Rational Tools and Processes.
- Trinity Software has been engaged on some of the largest deployments of Rational products in the United States.
- By solely focusing on the Rational products and process, Trinity Software can provide a depth of knowledge and experience unsurpassed.

Rational Partnership Status

- The Rational Business Alliance Program is a valuedriven program designed to identify program members who deliver the complementary, quality solutions and services that help Rational customers succeed.
- The Rational Business Alliance Program awards its members with one of three designations. These designations indicate that the alliance member has key credentials. This helps ensure that you receive solutions and services from organizations that are knowledgeable about Rational tools and technologies.
 - Alliance Member Bronze Level
 Field Tested Silver Level
 Field Tested Gold Level

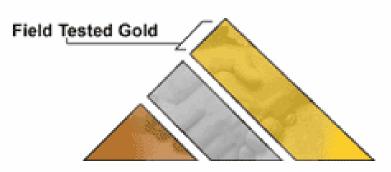
Rational Partnership Status





Alliance Members with the **Field Tested Gold Level** designation are Rational's premiere group of Alliance Members. Field Tested Gold Level Alliance Members have a very large number of Rational certifications and a very large number of customer successes or customer references. They have also submitted original content to Rational information resources such as the Rational **Developer Network.**

Rational Partnership Status





Overall, these members have met or exceeded a stringent set of criteria that only the very best Alliance Members can achieve. In each case, the service or solution provided by these alliances, their high ethics, their willingness to ensure consistent success and satisfaction, and their ability to work as an extension to the Rational team has been documented and verified. You can select these alliances with the highest degree of confidence. 7

- Trinity is also an Education Partner with Rational.
- Only 5 companies in the world are classified as both a Gold Level Service Provider and an Education Partner.
- Education partnership indicates that Trinity staffs consultants that have been certified by Rational University as qualified to deliver the Rational University Courseware.
- Trinity has the ability to deliver exactly the same training that Rational delivers.
- Trinity also has it's own line of training material that can be customized to the client's specific needs.

Services

- At Trinity Software Solutions, we focus our services on improving our customers software development capability and productivity through the implementation of the Rational Unified Process and Rational Software's associated tools.
- Our vast experience has shown us that customers need a unified tool-process strategy that is practical, implementable and supported with consulting, mentoring and training.

Enterprise CM With ClearQuest and ClearCase

IBM Rational software configuration management solutions

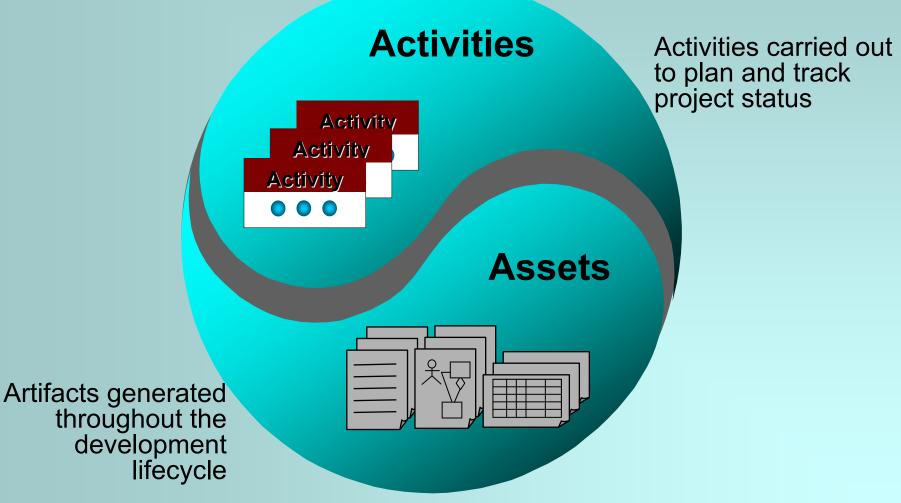
- Simplify and control change requests with ClearQuest
- Accelerate productivity with parallel development using ClearCase
- Adapt quickly to business demands using Rational Unified Change Management (UCM)

Rational ClearQuest

- ClearQuest is a change request management system.
- Change Requests such as defects and enhancements are created and managed using ClearQuest and are referred to as "Activities".

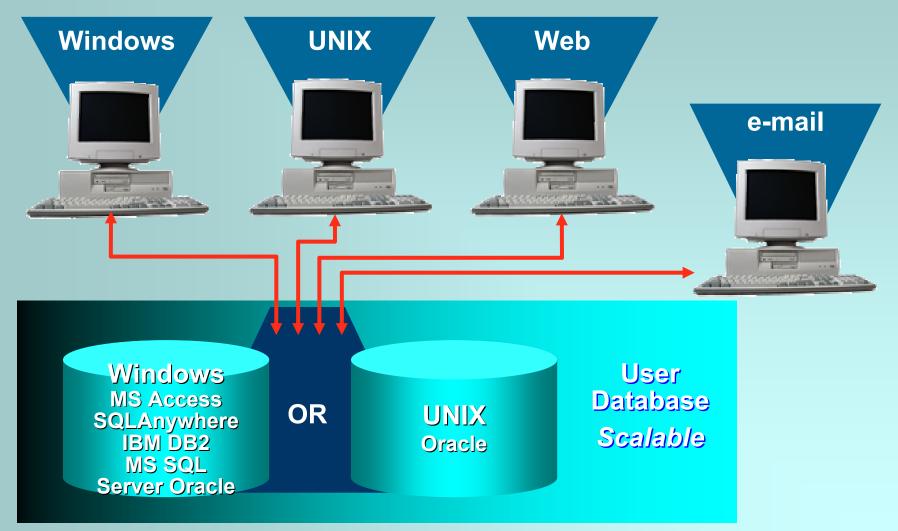
There is a direct integration between ClearCase and ClearQuest which provides a mechanism to link change requests with modifications to software artifacts such as source code and documentation.

Solution: Manage and control change at the activity level



Capture change requests Communicate realtime project status Control change at the "Activity" level Ocustomize Rational ClearQuest to meet your needs





Rational ClearQuest: Windows

Core capabilities

- Submit and modify change requests
- Run queries, charts and reports
- Drill-down charting
- Design and generate report formats

Integrations

- Rational Suite
- Rational ClearCase/UCM
- Microsoft Project
- Database support
 - Oracle (UNIX or Windows)
 - SQL Server (Windows)
 - IBM DB2 (Windows or AIX)
 - SQL Anywhere, MS Access
- ClearQuest Designer
 - Administrator only



Rational ClearQuest: UNIX

Core capabilities

- Submit and modify change requests
- Run queries and charts
- View text-based reports
- Integrations
 - Rational ClearCase/UCM
 - Command-line interface
- Database support
 - Oracle (UNIX)
 - SQL Server (Windows)
 - IBM DB2 (Windows or AIX)
- Platform support
 - Solaris, HP-UX, Linux, AIX



Rational ClearQuest: Web and WebEntry

ClearQuest Web

- Submit and modify change required
- Run queries, charts and reports
- No integration support

ClearQuest WebEntry

- Capture/Query client capability
 - Submit new change requests
 - Run a single query
- No license required!



Rational ClearQuest: e-mail

- Submit and modify change requests
 - Rational Mail Reader runs as a service
 - E-mail submissions use formatted text
- No license required!



Communicate real-time project status

Queries & Charts

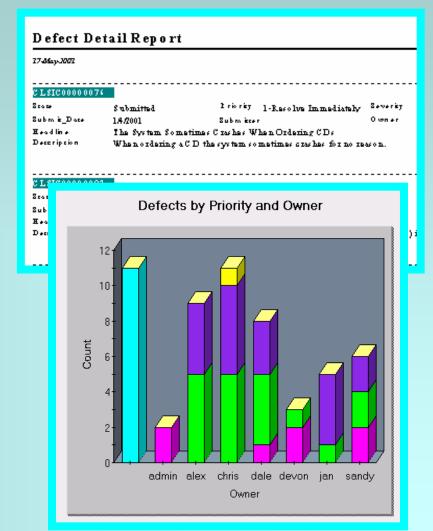
- Easily create and modify with Wizards
- Charts: Aging, Trend, Distribution

Reports

- Crystal Reports-based run-time engine
- Export to many common formats (Excel, Word, HTML)

E-mail notification rules

- Automatic notification of events and state changes
- Configurable through GUI interface
- No programming required!



Resource allocation

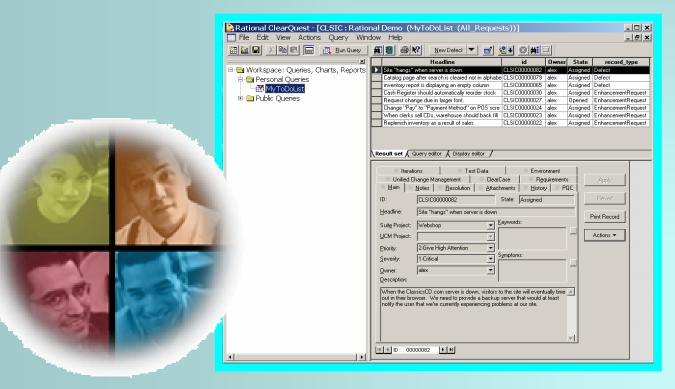
- "Are change requests distributed evenly across the team?"
- Who is available to take on a mission-critical bug fix?"
- Project status
 - "How many Priority 1 defects are still outstanding?"
- Trends
 - "How long is it taking to fix the average bug?"
 - "How long is taking to implement enhancer requests?"
- Testing

"How many defects are in the verifying state?"

To-do list

What change requests have been assigned to me?"

"What should I work on first"

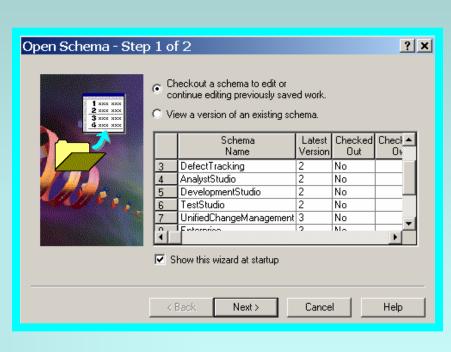


Customize Rational ClearQuest to meet your needs

- Choose from several "out of the box" schema implementations
- Extend functionality using pre-defined Packages
- Take control of your schema with the Rational ClearQuest Designer
 - Add fields and control behavior
 - Modify forms
 - Configure the State Transition Matrix
 - Extend your system with hooks

Blank

- Used to create a schema from scratch
- Common
 - Basic field structure common to all other pre-defined schemas
- DefectTracking
 - Standard "out of the box" defect tracking solution
- AnalystStudio,
 - DevelopmentStudio, TestStudio, Enterprise
 - Rational Suite product integrations
- UnifiedChangeManagement
 - Supports UCM-enabled projects, allowing true "Activity-based" development



Create new fields of any type

- Integer, date/time, short string, multi-line string, attachment list, reference, reference list
- Easily set a field's behavior

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🖻 🛅 Defect	is_active	READONLY	READONLY	READONLY	READONLY	READONLY	READONLY
- 🗂 Fields	id	READONLY	OPTIONAL	READONLY	READONLY	READONLY	READONLY
🖃 😋 States and Actio	State	READONLY	OPTIONAL	READONLY	READONLY	READONLY	READONLY
- 👷 Actions	version	READONLY	READONLY	READONLY	READONLY	READONLY	READONLY
P2 Behaviors	lock_version	READONLY	READONLY	READONLY	READONLY	READONLY	READONLY
	locked_by	READONLY	READONLY	READONLY	READONLY	READONLY	READONLY
🔤 Defect_Base	history	READONLY	READONLY	READONLY	READONLY	READONLY	READONLY
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Dynamic List Names	Submit_Date	READON L	Jse Hook	ONLY	READONLY	READONLY	READONLY
	Owner	OPTIONAL	MANDATORY	MANDATORY	MANDATORY	MANDATORY	OPTIONAL
	old_id	READONLY	READONLY	READONLY	READONLY	READONLY	READONLY
	Keywords	OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL
	Symptoms	OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL
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· · ·	Notes Log	READONLY	READONLY	READONLY	READONLY	READONLY	READONLY
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Built-in visual form editor

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Rational ClearQuest Designer

A state machine controls the flow of records through your system

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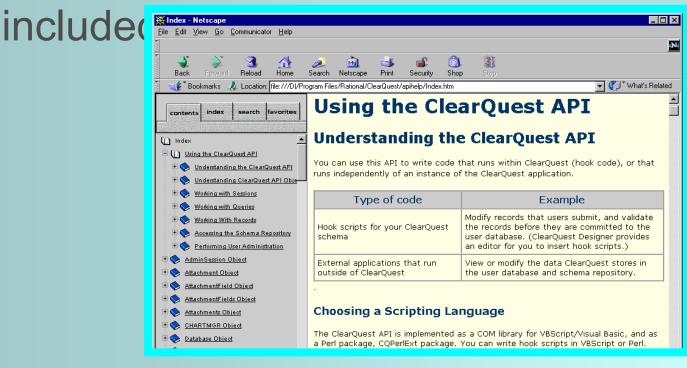
- Automate and enforce your process
- Output termine in the second secon
- Built-in text editor (ClearQuest Designer)
- Occumented with sample code included
- ●Examples:
 - Dependent list use a field choice list hook so that the values in a choice list vary according to the value entered in another field.
 - Field value validation use an action validation hook to prompt the user if invalid data has been entered in one or more fields.
 - Default value use a default value hook to initialize a field value: Sub submitter DefaultValue(fieldname)

' fieldname As String
' entityDef = swbug
SetFieldValue fieldname, GetSession().GetUserLoginName()
End Sub

COM-based

Allows other programs access to the core

API documentation and sample code



Simplify and control change with ClearQuest

- Accelerate productivity with parallel development with ClearCase
- Adapt quickly to business demands using Rational Unified Change Management (UCM)

* International Data Corp, SCM Tools Forecast and Analysis, 2001-2005 The leading SCM solution ranked #1 for the last four years*.

Rational ClearCase

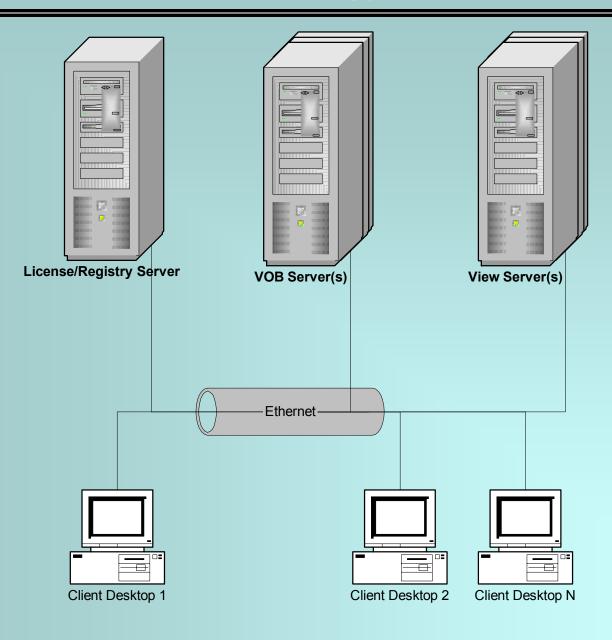
ClearCase is a software configuration management (SCM) tool that provides secure access control, version control, work space management, and parallel development capabilities for the software development and release process

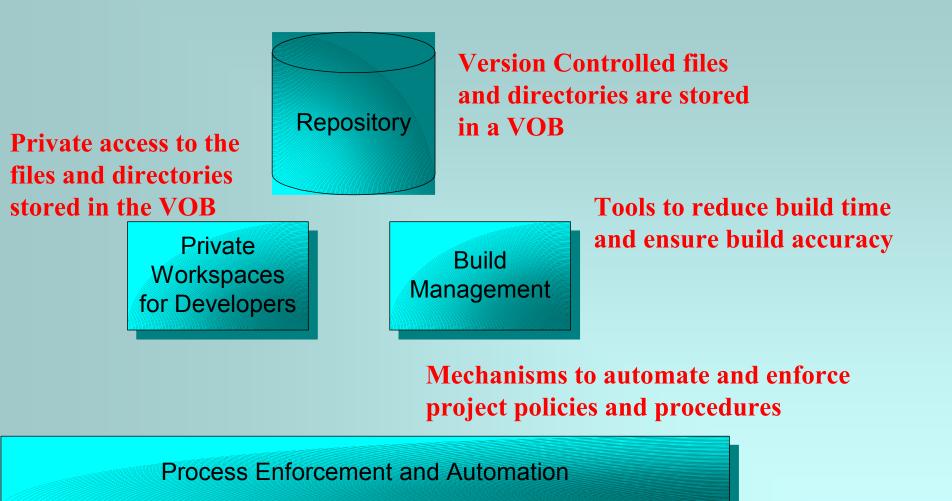
Overview of ClearCase Support for SCM

Architecture

- ClearCase is a distributed application with a client/server architecture.
- This means that multiple processes running on multiple hosts govern "how" ClearCase operates.
- ClearCase has its own file system, called the MVFS (Multi Version File System)
- MVFS is an extension to the native file system
- On Windows, MVFS is a file system driver mapped by default to drive letter M:
- On UNIX, MVFS is linked with the OS either statically or dynamically
- ClearCase implements access controls based on the platform users and groups authentication method.

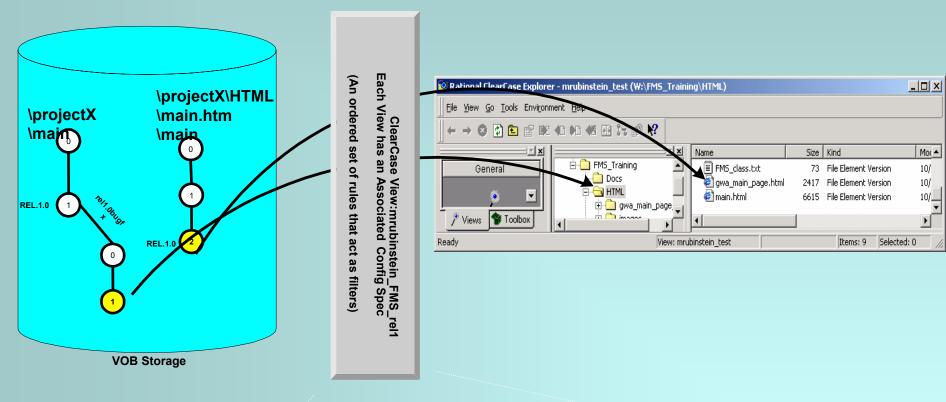
Clear Case Network Topology





- Elements are files and directories each encompassing as set of versions and history
- A VOBs is a network wide repository/database that stores the version history of elements (files and directories) and all metadata relating to the elements.
- A view provides a developer with a private workspace for development. A view is used to to gain visibility to elements stored in the VOBs

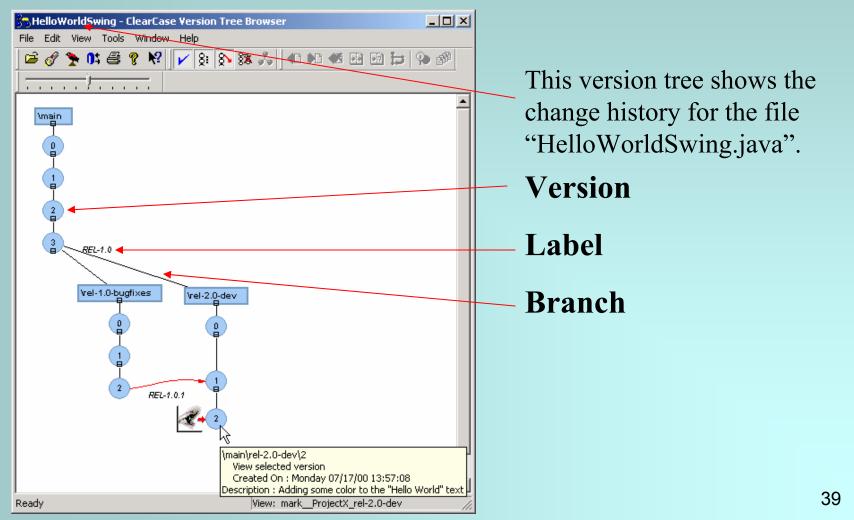
Metadata is data associated with elements which supplements the file system related data. Metadata includes triggers, labels, attributes, branches, hyperlinks and element



element * CHECKEDOUT element * /main/rel.1.0.bugfix/LATEST element * REL.1.0 -mkbranch rel.1.0.bugfix element * /main/LATEST -mkbranch rel.1.0.bugfix

Elements

An element is either a file or a directory and has a history that is represented as a version tree



Easy to Use: Workspace management

Network or disconnected access

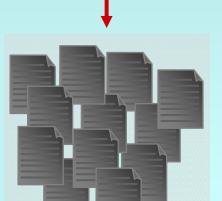
Oynamic Views

- Access any configuration immediately
- Global view of code base enables sharing

Snapshot Views

- Intelligent disconnected use
- Automatically detects and re-synchronizes "hijacked files"



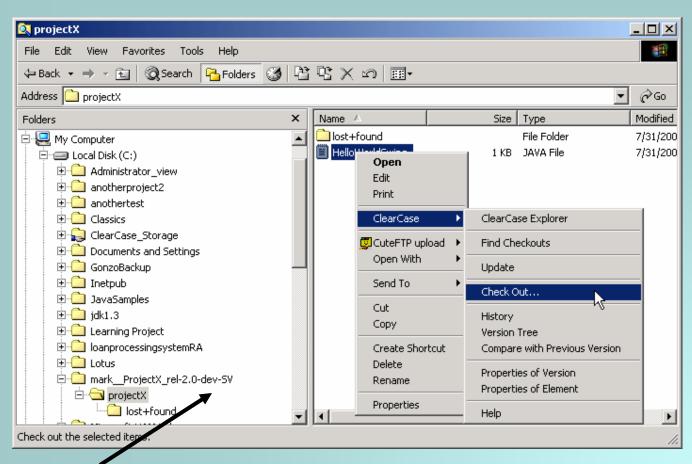


Dynamic View

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The view is visible to a client workstation as a mapped network drive. The actual location of the view storage is either on a central server or local to the client machine.

Snapshot View



The view is visible to a client workstation as a subdirectory under a local drive such as C:. It is also possible to place the snapshot view on a detached drive such as a floppy or ZIP disk.

Differences Between Dynamic & Snapshot Views

Oynamic View

- Runs on NT, 2000 and XP
- Always up-to-date with respect to the configspec.
- Requires little disk space because the files and directories accessed via. the view are projected from the VOB.
- Requires fulltime network access.

Snapshot View

- Accessible via NT, 2000, XP, ME & 98
- Requires a View Server Process to be running on NT, 2000 or XP.
- Will become out of date as others check-in elements.
- Must be updated periodically
- Requires more disk space because files are copied from the VOB to a local directory
- Allows for work while disconnected from the network

Developers access files from their natural environment IDE integrations and APIs Windows Explorer Command-line

Easy to use: Windows Explorer

Intuitive, customizable integration with Windows Explorer

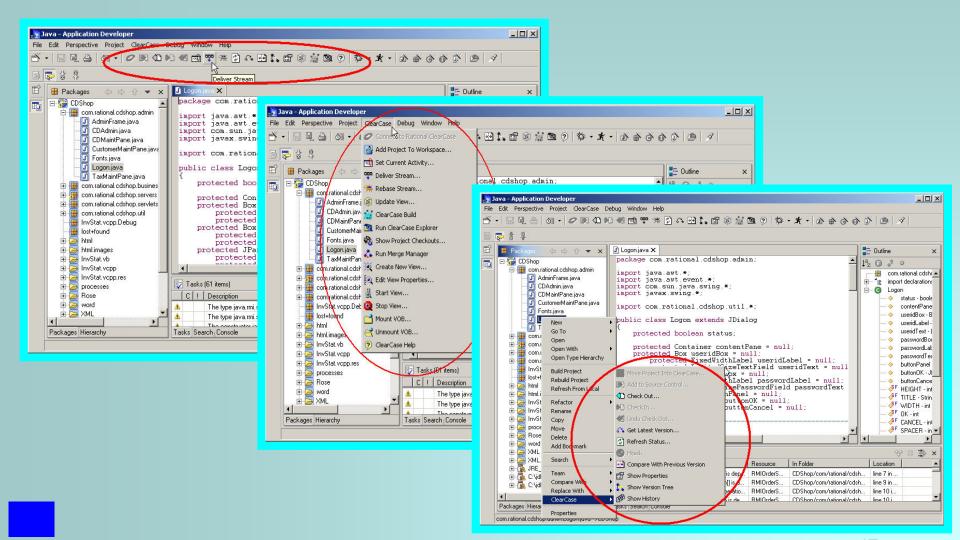
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Easy to use: ClearCase Explorer

ClearCase Explorer provides a familiar, customizable interface

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Easy to use: WebSphere integration



Easy to use: Rational ClearCase vs.NET integration



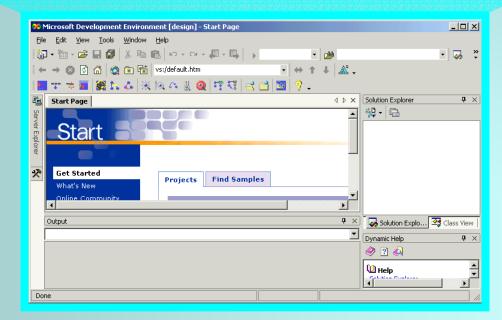
Menu Bar

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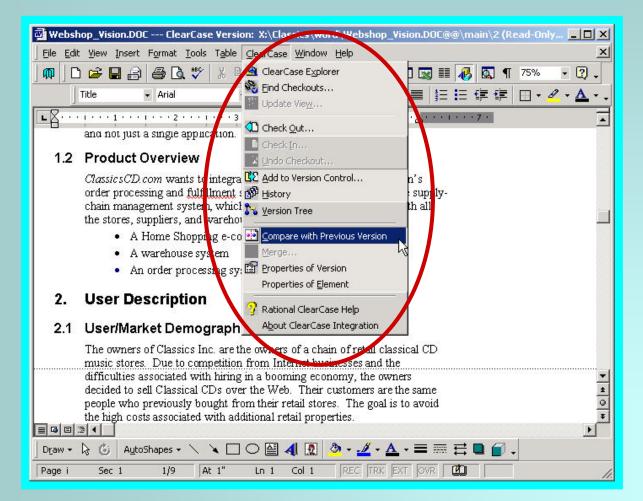
Easy to use: Rational ClearCase vs.NET integration







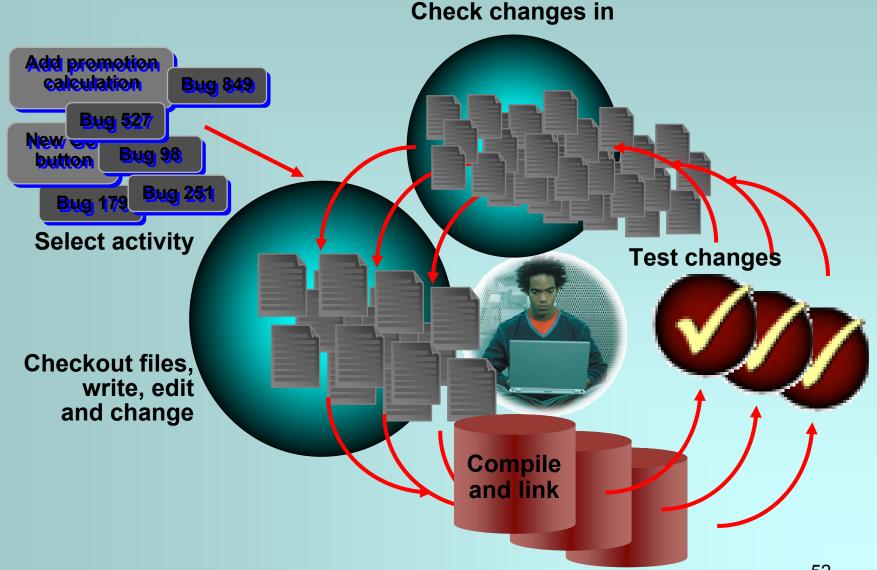
Easy to use: Microsoft Word integration



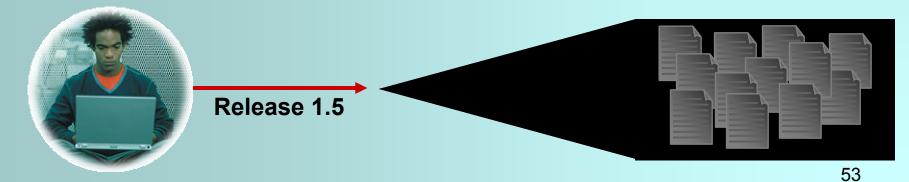
Easy to use: Many other integrations



Parallel development: Working on many things at once

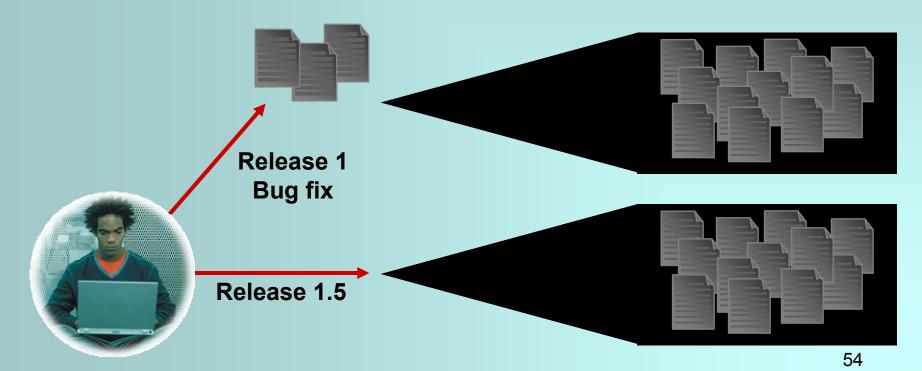


Work simultaneously on multiple releases



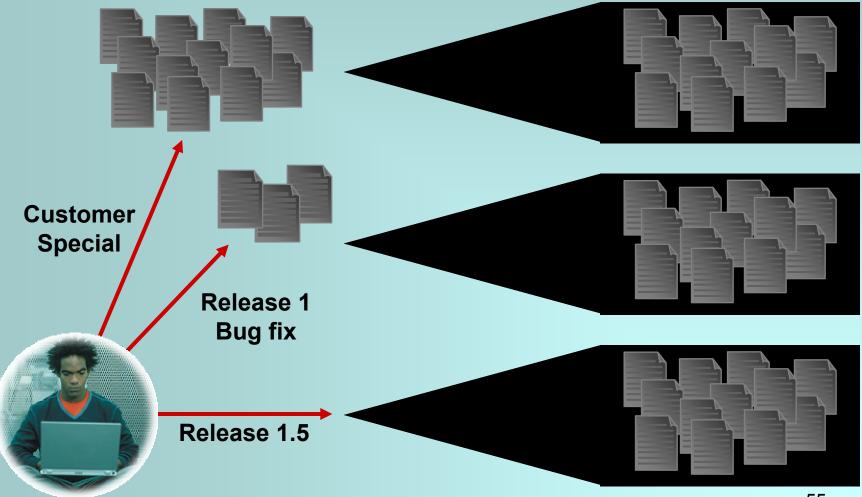
Parallel Development

Work simultaneously on multiple releases

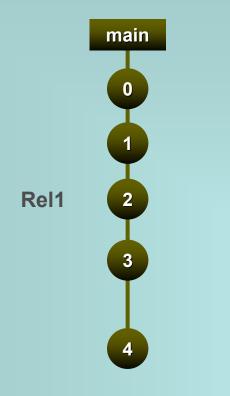


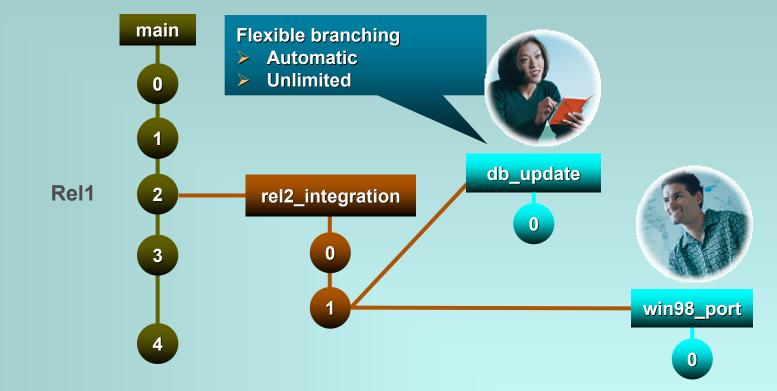
Parallel Development

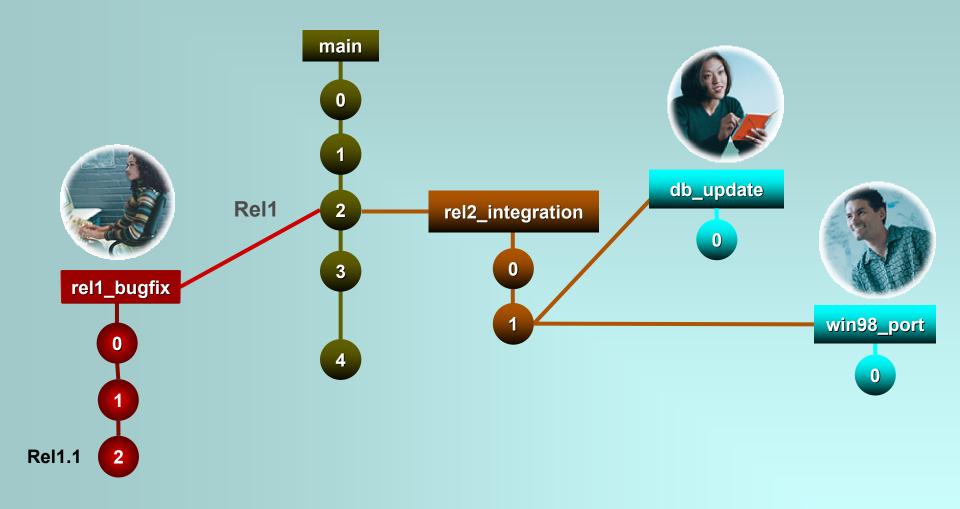
Work simultaneously on multiple releases

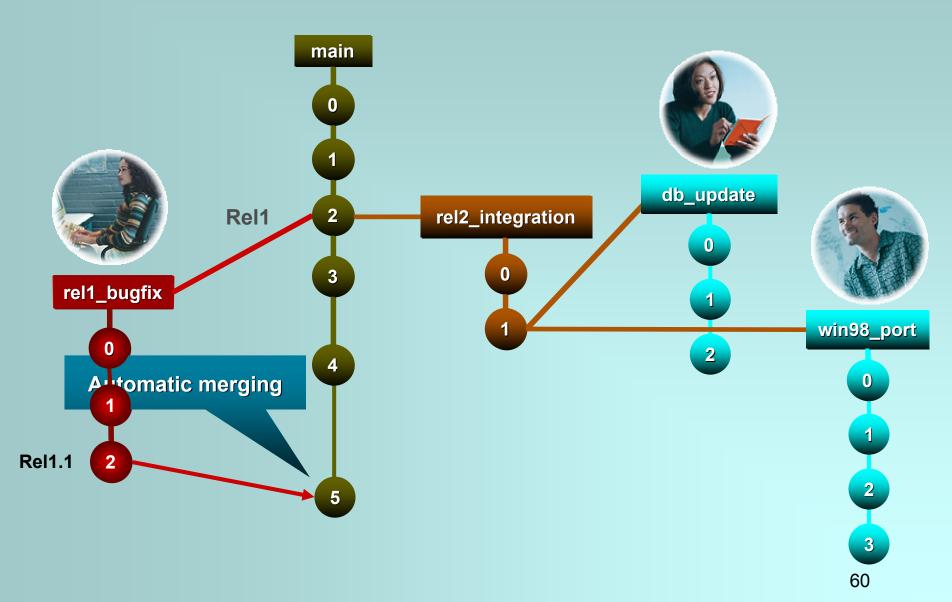


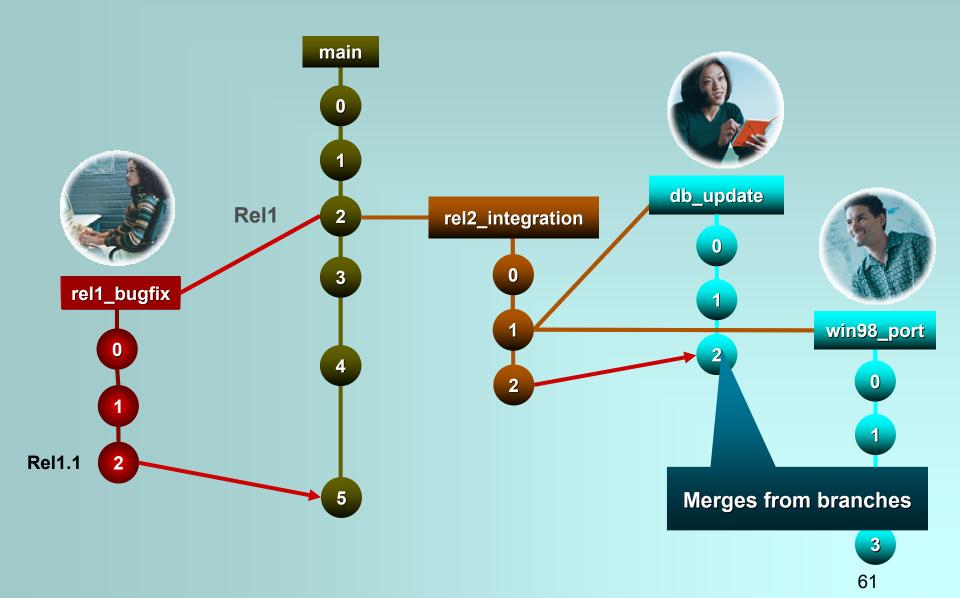
Simultaneous changes to the same artifacts

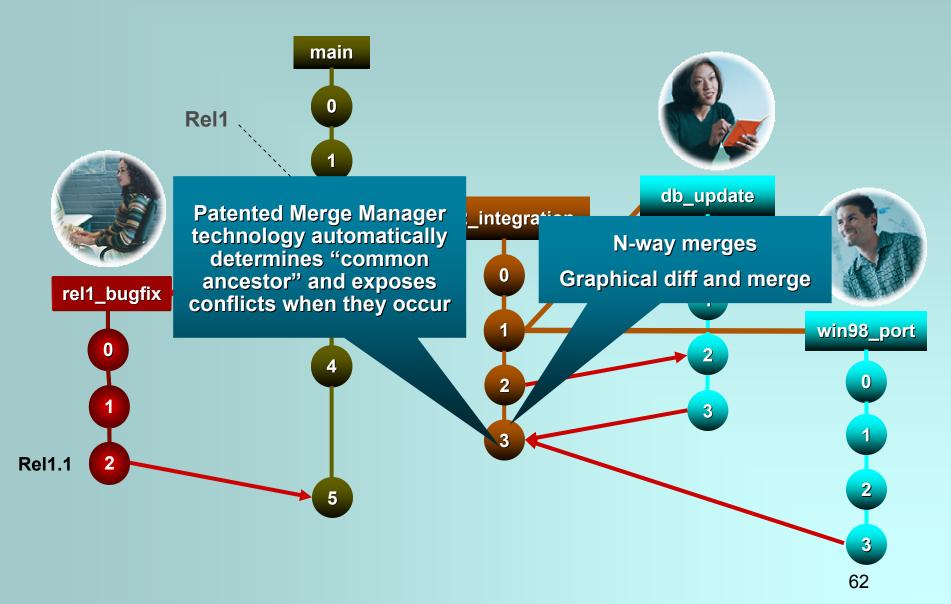


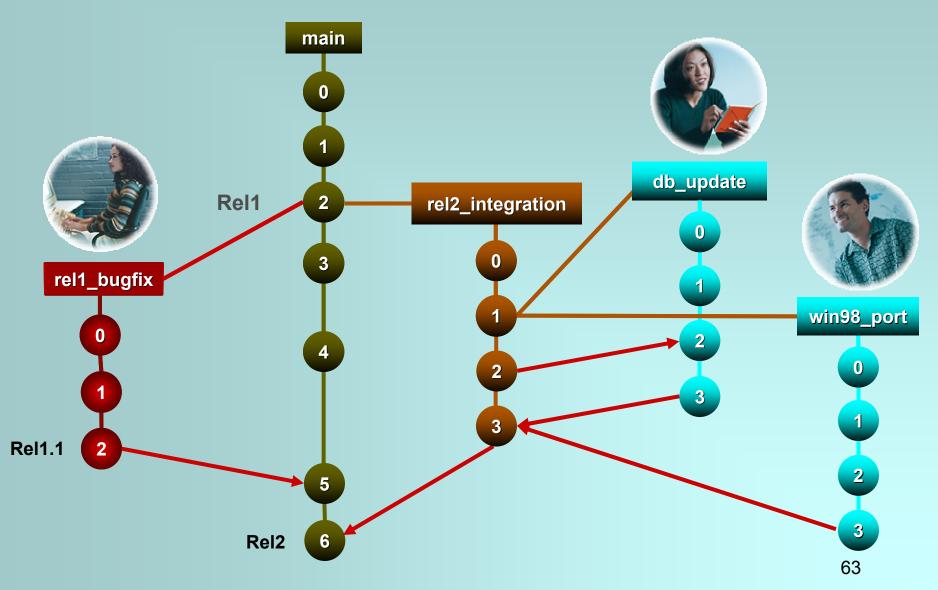




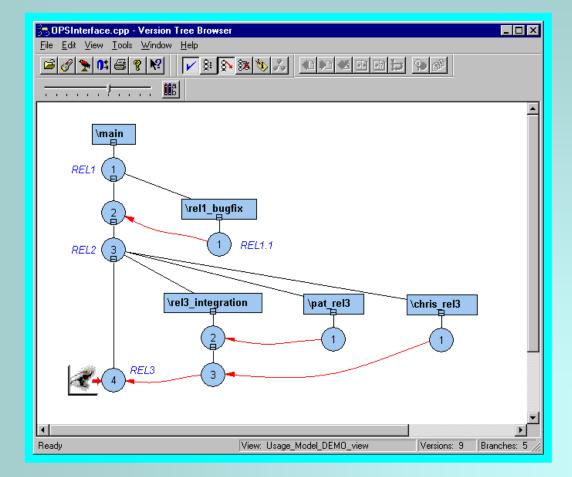








Parallel development: Version tree browser

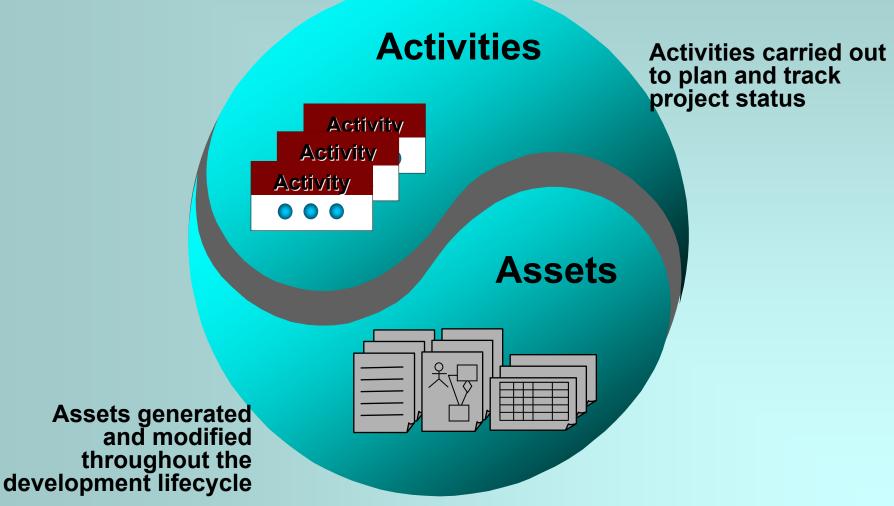


Rational Software Configuration Management

Simplify and control change Accelerate productivity with parallel development

Rational Unified Change Management (UCM) an "Out of the Box" Process.

Out of the box process: Unified Change Management (UCM)



OCM Activities automatically manage Change Sets

- Activities in Rational ClearQuest track Rational ClearCase assets
- Developers, Integrators, Testers work with Activities, not lowlevel assets

Rational ClearQuest

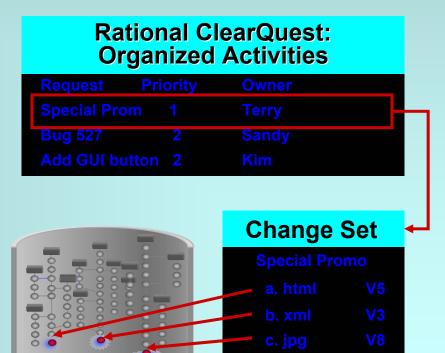
Manages activities

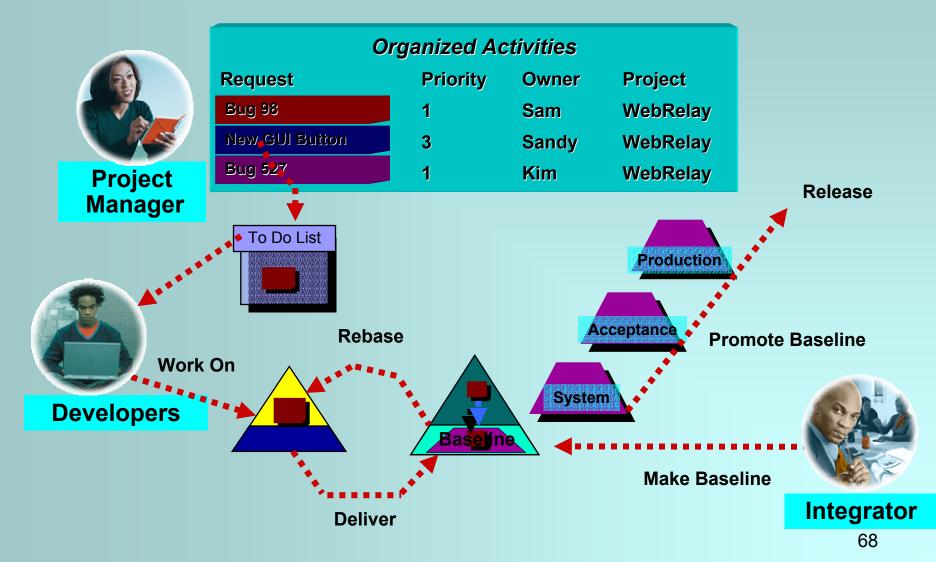
- To Do Lists
- Workflow

Rational ClearCase

Manages assets

- Versioning: code, models, XML, HTML
- Parallel developmen

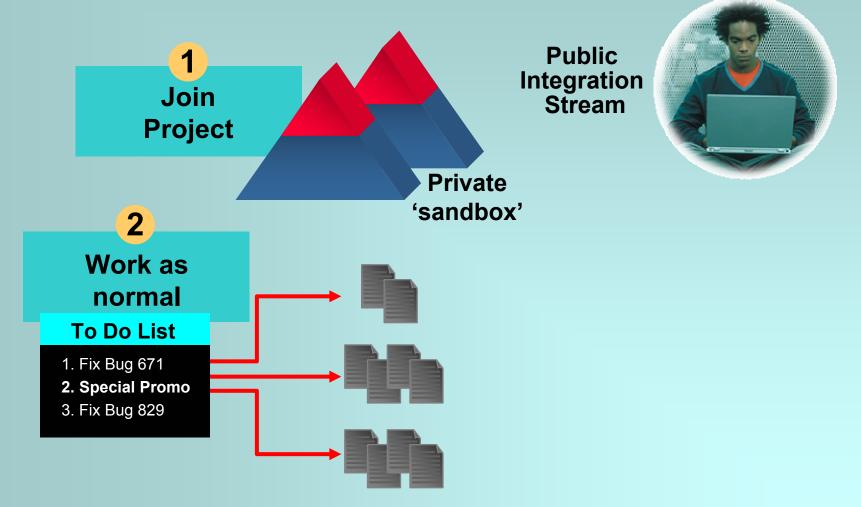




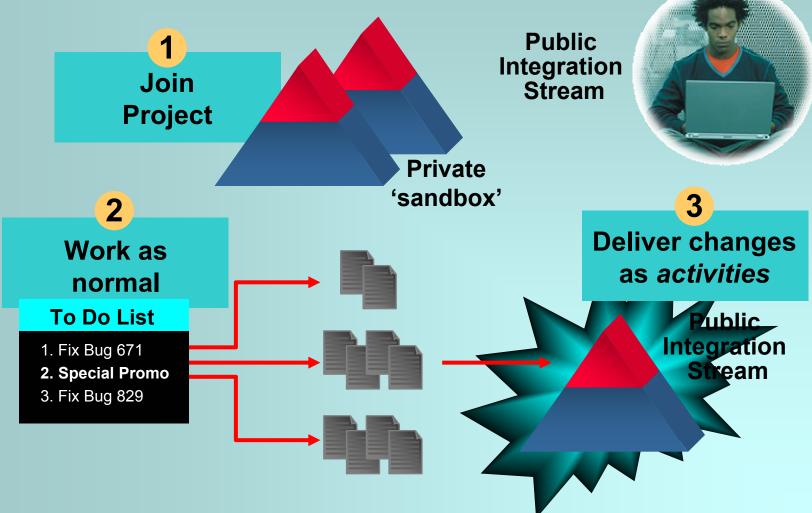
Unified Change Management: Optimized for developers



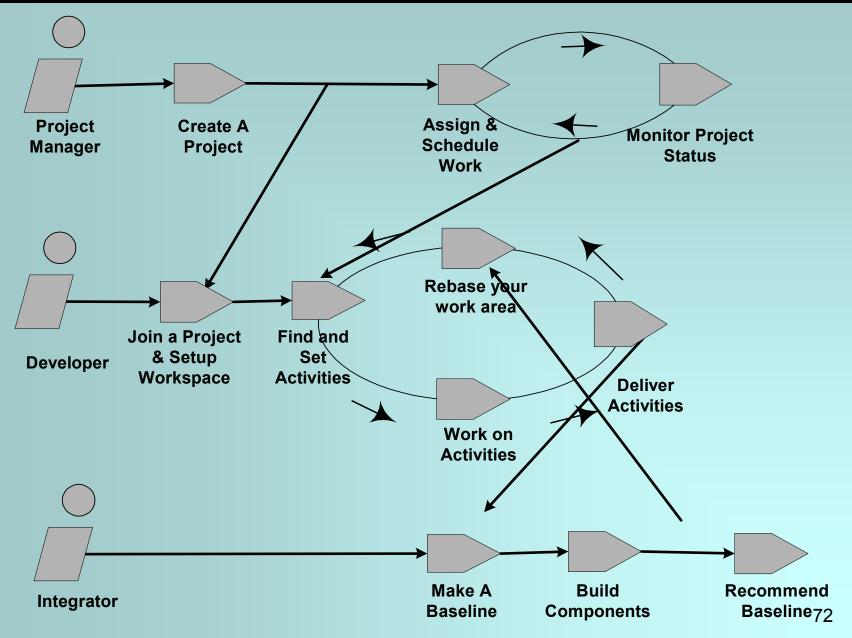
Unified Change Management: Optimized for developers

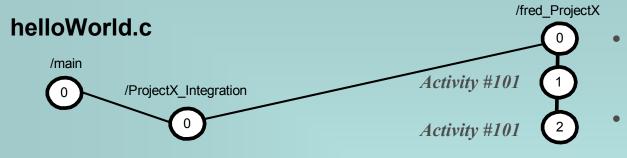


Unified Change Management: Optimized for developers

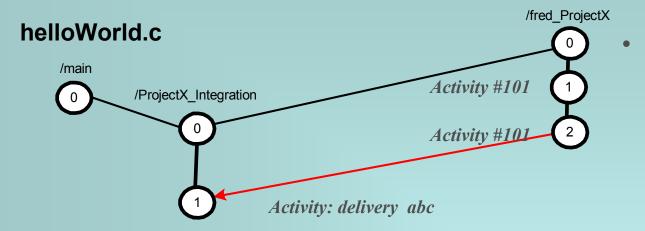


UCM Concepts – Workflow (cont.)





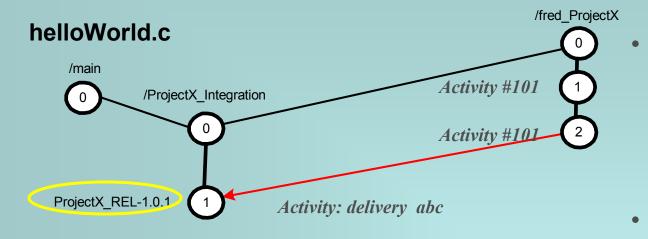
- Fred adds a new file to ClearCase
- ClearCase creates version 0 on the main stream (branch).
- ClearCase creates an instance of the
 ProjectX_Integration stream (branch) and creates version 0 on that stream (branch)
- Fred begins working on activities down his private stream(branch).



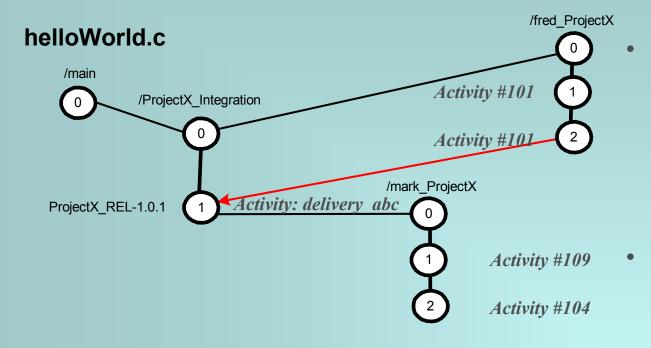
After Fred finishes working on the assigned activities he performs the action "Deliver" which effectively merges his changes associated with the specified "Activities" onto the ProjectX_Integration stream(branch).

• Fred may continue working on his stream on new or existing

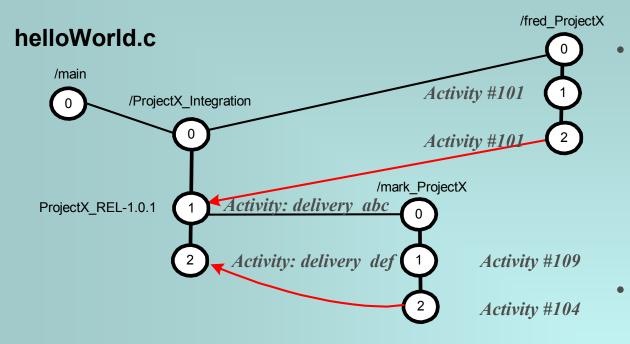
activities.



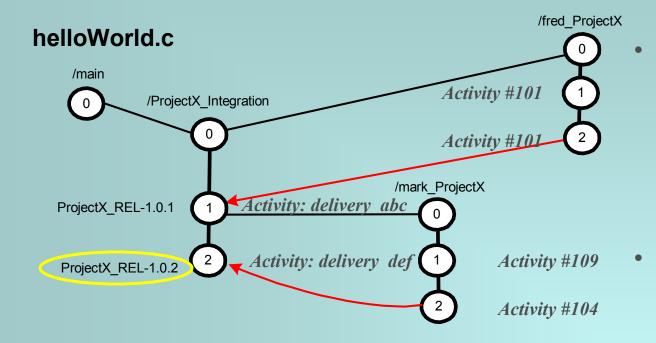
- The integrator creates a new project baseline
 and assigns a "stability attribute" to the
 baseline.
- Over time the stability
 of the baselines will
 improve and the
 baselines will be
 recommended for use
 by developers



- Mark has joined the
 project and has been
 assigned "Activities" to
 work on related to
 defects in the file
 helloWorld.c
- Mark begins working against the recommended baseline "ProjectX_Rel-1.0.1".



- Mark has completed his assigned
 "Activities" and has then delivered those
 "Activities" to the integration stream(branch).
- NOTICE: Fred doesnot yet have visibilityto the changescompleted by Mark.



The project integrator
once again creates a
new baseline and
eventually
recommends it for use
by the developers.

NOTICE: Fred still does not have visibility to the changes completed by Mark included in the new baseline "ProjectX REL-1.0.2"

