



Putting the Agility into software delivery with IBM Rational Team Concert

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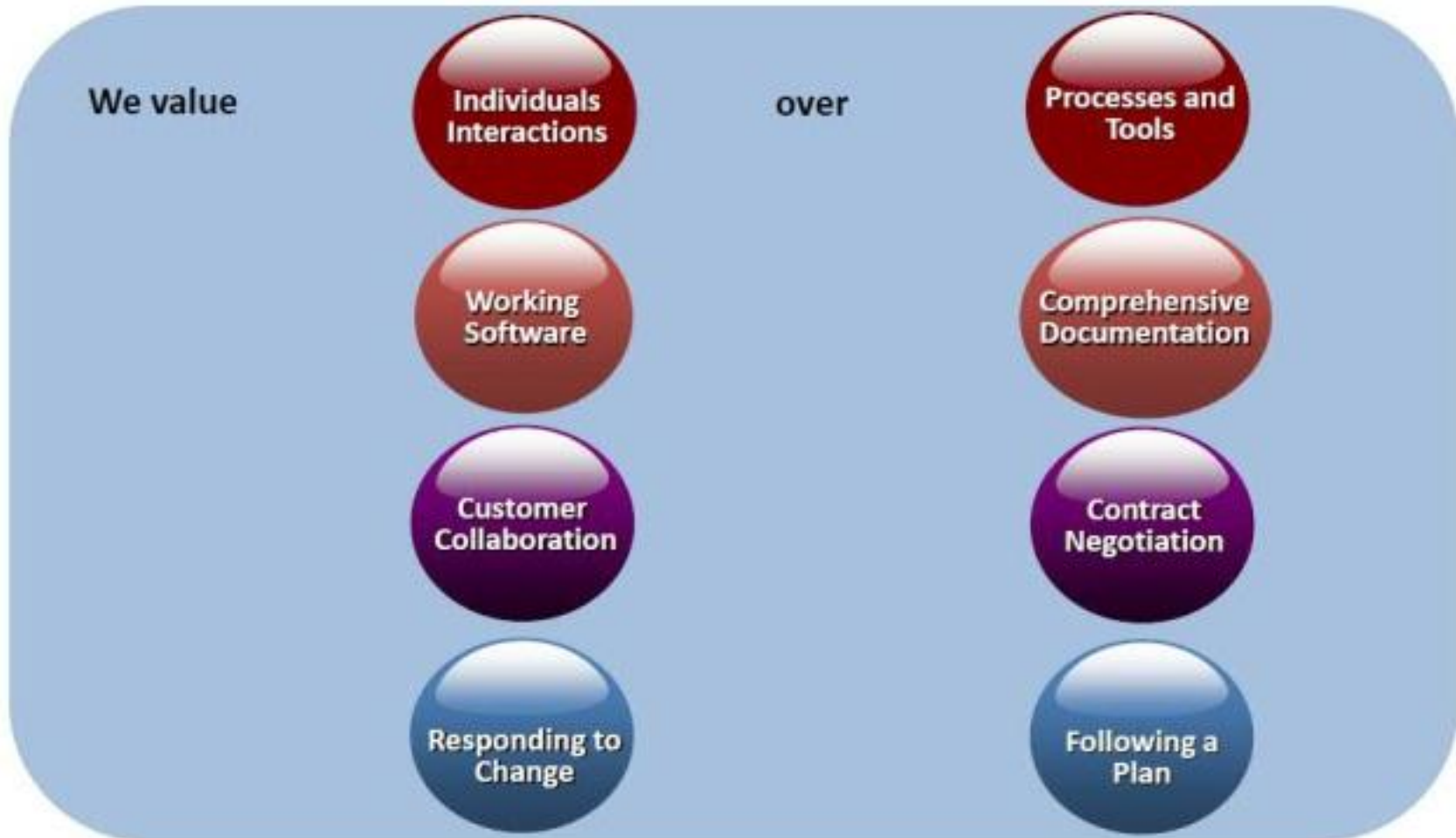
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Agile Values



While there is value in the items on the right, we value the items on the left more.

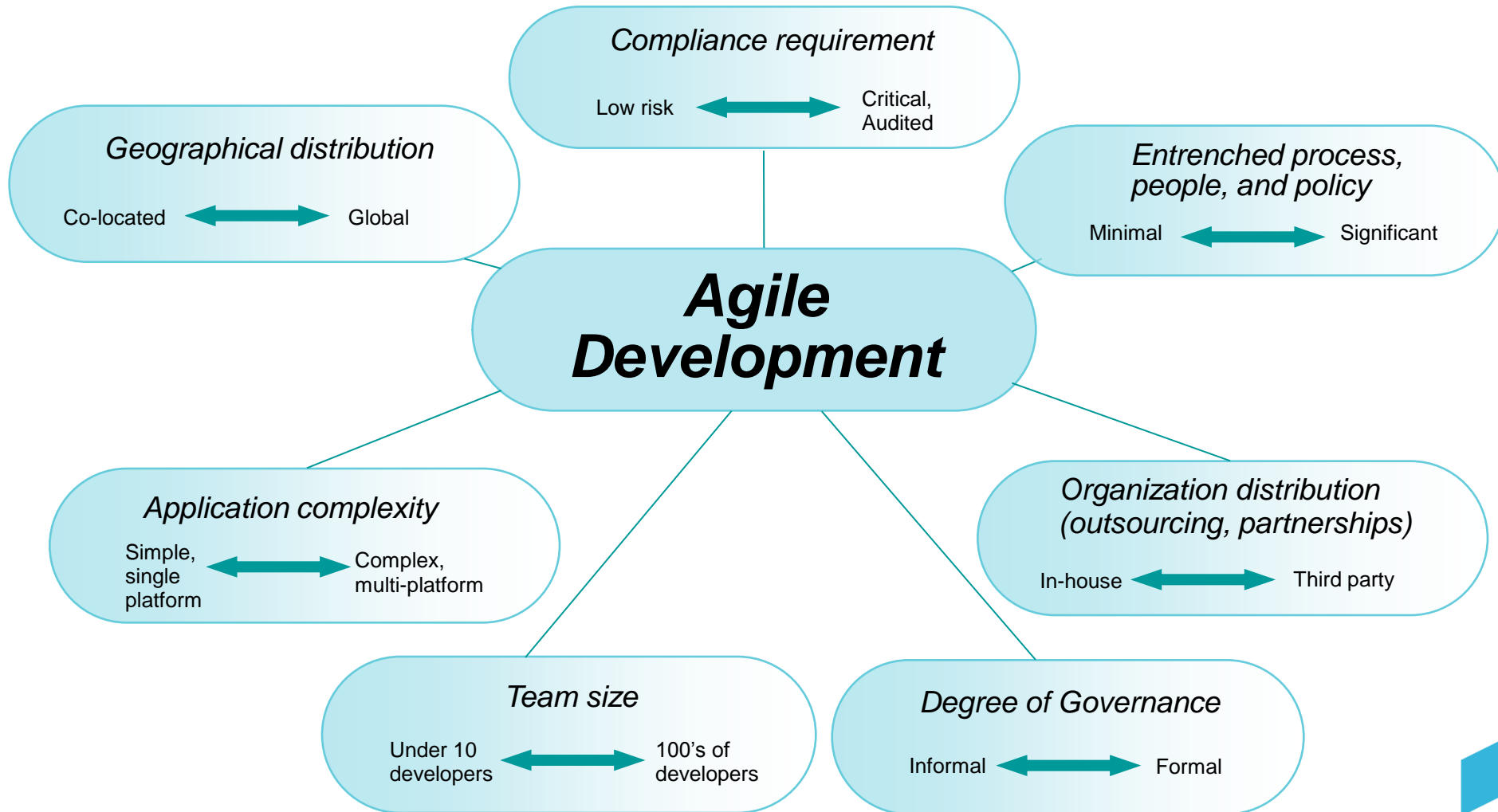
www.agilemanifesto.org

What is Agile?

- For every stable development methodology, there need to be checks and balances

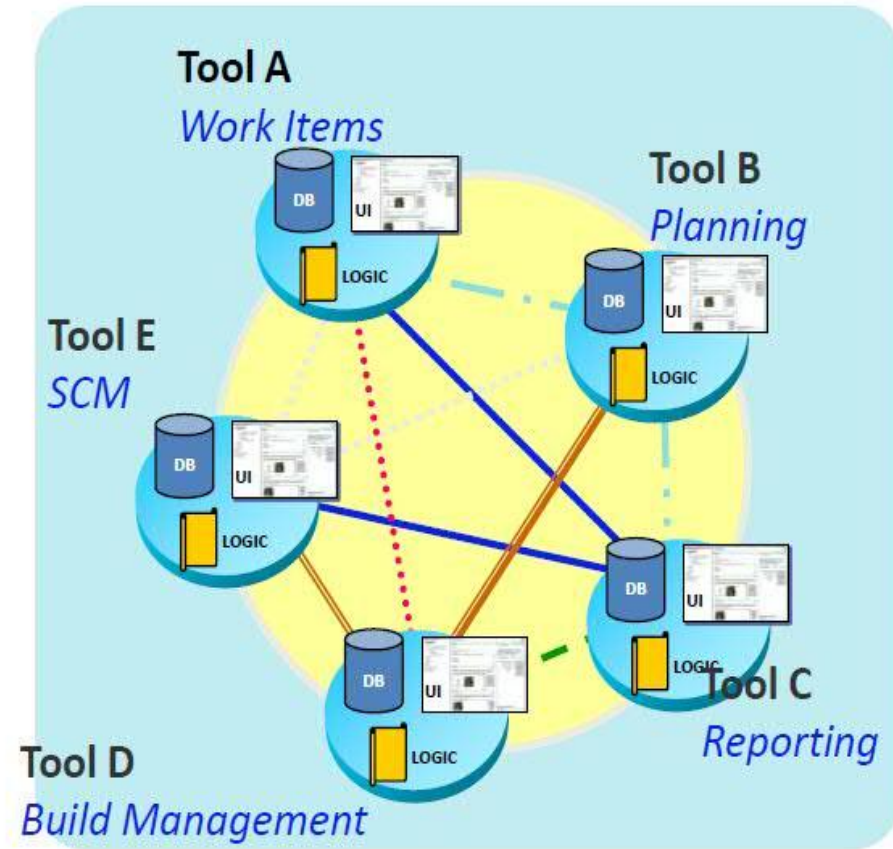
What you aim for	How you get to it
<ul style="list-style-type: none">➤ Software that works➤ Is delivered on time➤ Responds to changes	<ul style="list-style-type: none">✓ Just enough design✓ Iteration and Release Planning✓ Evolving processes✓ Continuous integration✓ Test driven development✓ Stakeholder collaboration throughout the cycle✓ End of iteration demos✓ Retrospectives

Challenges with becoming more Agile



There are diverse set of tools...

- Traditionally, each tool come with its own
 - UI -Web and desktop presentations of views and tasks
 - Logic –Workflow, process, search, query, scale, security and collaboration
 - Storage –Availability ,traceability
 - Privacy, backup/archive
- Resulting in...
 - Brittle integrations
 - Silos everywhere
 - High cost to maintain and administer
 - Proprietary API's



How do you Solve this ?

Team Concert enables teams to more easily adopt and support agile development with greater team productivity and results

Facilitates the principles of high-performance teams



- Continuous integration
- Manage team assets
- Change driven
- Integrated / traceable

- Starting ad-hoc teams
- Team awareness
- Process awareness
- Ad-hoc sharing

- Process flexibility
- Iterative plan-execution
- Multiple releases
- JIT code reviews

- Transparency
- Objective commonality
- Project health checks
- Context driven

Rational Team Concert : A Closer Look

Planning

- Integrated release/iteration planning
- Effort estimation & progress tracking taskboards
- Out of the box process templates: formal or agile

Project Transparency

- Customizable web based dashboards
- Real time metrics and reports
- Project milestone tracking and status

SCM

- Component based SCM enables reuse across projects
- Change set based for easy addition or removal of features
- Server-based sandboxes
- Use RTC SCM or SVN, Git, ClearCase or Synergy

Work Items

- Defects, enhancements and conversations
- View and share query results
- Support for approvals and discussions
- Query editor interface
- Connects to ClearQuest or Change

Build

- Automated Work item and change set traceability
- Build definitions for team and personal builds
- Local or remote build servers
- Multi-level continuous integration
- Can integrate with Build Forge

Jazz Team Server

- Single structure for project related artifacts
- World-class team on-boarding / offboarding including team membership, sub-teams and project inheritance
- Role-based operational control for flexible definition of process and capabilities
- Team advisor for defining / refining "rules" and enabling continuous improvement
- Process enactment and enforcement
- In-context collaboration enables team members to communicate in context of their work

Rational Team Concert – A single tool, many capabilities

- Process simplified
 - A living, breathing process: trained by you
- Track your tasks
 - Smartly linked work items that behave how you want them to
- Manage your sources
 - Create, undo, share, update, review, suspend, resume, patch
- Keep builds healthy
 - Build continuously, at multiple levels, with the technology of your choice
- Dashboards for status
 - Easy-to-create, web-based dashboards
- Runs anywhere
 - From Linux to Windows, Mac to mainframe, Eclipse to Visual Studio
- Open for Integration
 - OSLC

Process Rules and Enforcement

- Teams work on projects
 - each project follows a **process**
 - different processes for different
- Process determines:
 - how you organize your work
 - artifact types and their states
 - preconditions and follow-up actions on operations manipulating artifacts
 - roles and permissions
- Described with **Process templates**
- Process can evolve as project progresses
 - customized
 - Workitem categories
- **Automatic Process enforcement!**

Actions	Everyone (default)	Product Owner	ScrumMaster	Team Member
Dashboards				
+ Save Personal Dashboard (server)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
+ Save Project Dashboard (server)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Item Connectors				
+ Delete Synchronization Rule Info (server)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
+ Save Synchronization Rule Info (server)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Process				
+ Save Project Area (server)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Work Items				
+ Save Attachment (server)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
+ Save Category (server)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
+ Save Release (server)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Create Project Area

Choose Process Template

Select the template for the process that should govern the project area.

Available Process Templates: Filter by locale: English (United States)

- Agile Process
- Eclipse Way Process
- Formal Project Management
- Jazz Support (Private)
- Jazz Support v2
- OpenUP Process
- Scrum**
- Scrum
- Simple Team Process
- Unconfigured Process

Description:
A process template for Scrum. Scrum is a popular approach to manage projects in an agile way.

Locale:
English (United States)

Deploy Templates

on Finish as specified in the process template.
before I manually initialize the project area.

Deliver (failed)
Missing work item or comment

Problem
A work item must be associated with the change set or a comment must be set.

Reason
All change sets should be associated with a work item which is planned for the current iteration.

This makes it easier for the team to track its progress through the iteration and allows other users to understand why your changes were made.

Solutions
[Associate Existing Work Item](#)
[Associate New Work Item](#)
[Associate and Try Again \(expert\)](#)
[Overrule 'Descriptive Change Set'](#)

Next > Finish Cancel

Tracking work in distributed teams

- WorkItems

- Customizable
- Workitem categories
- In-context collaboration
- Transparent
- Execution items and Plan Items
- Queries

- Integration

- Link to your SCM
- Get included in your builds
- Link to
 - Each other
 - Test cases
 - Requirements

Task 214439

Summary: Automate delivery of ccb-generated target definitions to the stream

Details

- Type: Task
- Severity: Normal
- Found In: 4.0 Development
- How Found: Development
- Creation Date: Jun 8, 2012 10:12 PM
- Created By: Sonia Dimitrov
- Team Area: Release Engineering / Rati...cert
- Filed Against: Release Engineering
- Tags:
- Owned By: Li Zhu
- Priority: Unassigned
- Planned For: 4.0.1
- Estimate: Correction:
- Time:
- Due Date: None

Description

CCB generates target definitions z
This is a workitem to track change
How to adopt the changes to oth
- set auto.delivery.targets, Loffe
- update RTCIntegrationUUID ar

Discussion (27 comments)

27. Divya Vidyadharan, Oct 18, 2
@lizhu, target definitions we
I checked the log file and it l
[echo] Checking in changes
[exec] Result: 47
[echo] =====new char
[echo] **The URI to the rep
you know the repository U**
[echo] Could not find
[echo] associate work iter
[exec] Argument syntax e
[exec] **Extra argument to**
[exec] The. Try 'scm help c
[exec] Result: 1
[exec] **Argument syntax**
[exec] Extra argument to :
[exec] The. Try 'scm help c
[exec] Result: 1
[echo] Delivering change.
[exec] Problem running 'c
[exec] The URI to the repo
you know the repository URI,

Quick Information

- Subscribers (6): DV, LZ, MD, NE, SJ, SD
- Parent: 215734
- Related (1): 190446
- Mentions (39)
- Mentioned By (7)
- Change Sets (5)

Overview | Links | Approvals | History

Links

- Change Sets**
 - Process - Krishna Kishore - rtcnet-nl-return-20121011-2000 11:23:53 AM (6 hours ago)
- Included in Builds**
 - integration.3015.rtcnet I3.0.1.5_20121018-0154
- Mentioned By**
 - 236483: Incorporate CLM 2011 FP5 (3.0.1.5) NL returns into all projects
 - 221965: Track RTC 2011 FP5 M1 (Aug 8 - Sept 7) & M2 (Sept 10 - Oct 5) & RC1 (Oct 8 - Oct 19)
- Parent**

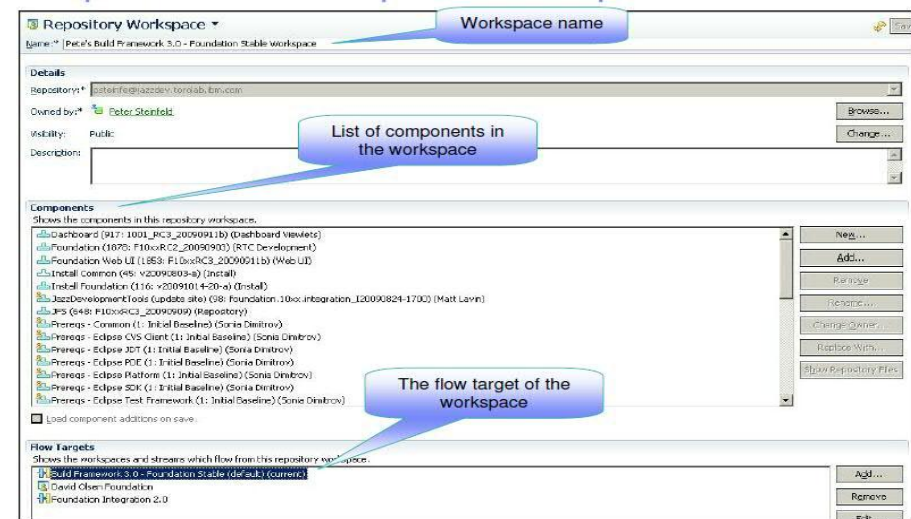
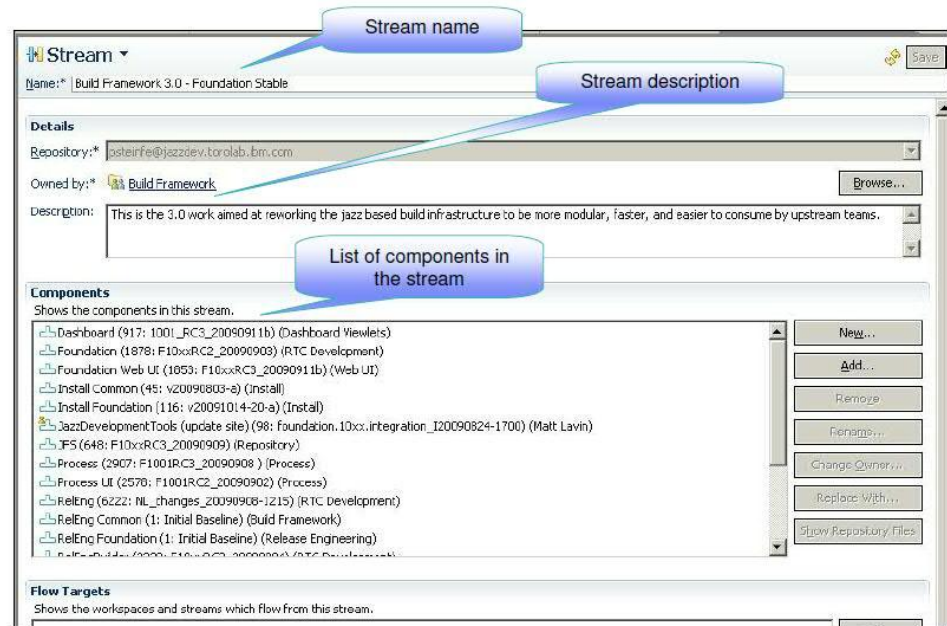
RTC SCM core concepts

Streams

- Stream captures a set of versions of files
 - Similar to the concept of a branch in other CM systems
 - The stream changes when people deliver new content
- Streams contain components
- Components contain directories and files

Workspaces

- Each developer has his own workspace
- The developer's workspace "flows with" a stream
- When the workspace is created, its contents match the contents of the stream at the time of the creation of the workspace
- "Accept" operations transfer changes from the stream to the developer's workspace
- "Deliver" operations transfer changes from the workspace to the stream



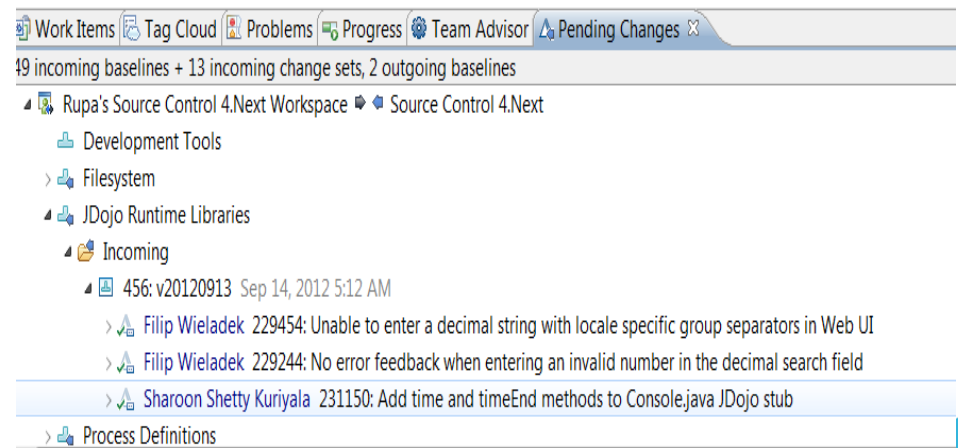
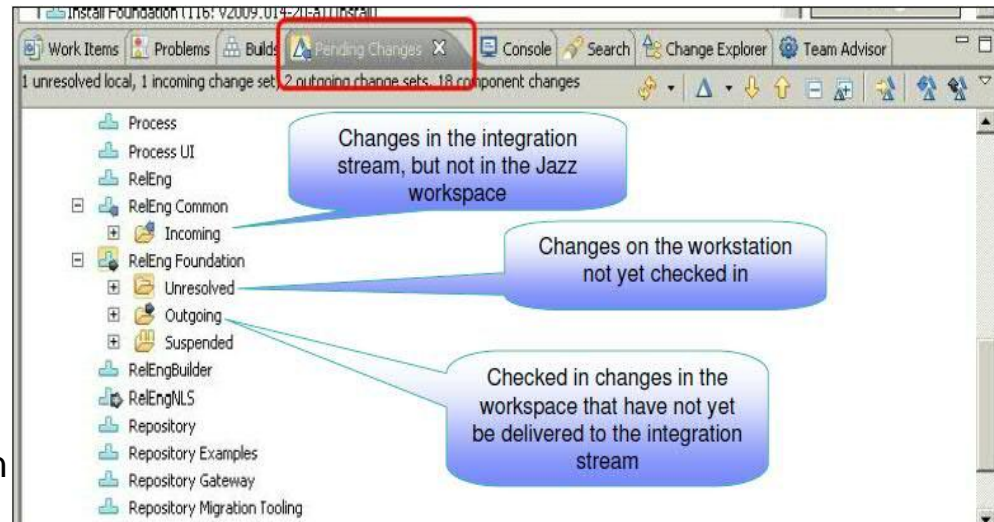
RTC SCM core concepts Contd.

Changesets

- Collaboration based on changesets
- Different versions of the same file can exist – On the developer's workstation, In the developer's workspace, In the stream
- At the moment a file is modified and saved, a new, different version exists on the workstation (unresolved).
- When the file is checked in, that version is transferred to the workspace (outgoing).
- When the change is delivered to the stream, that version will exist in the integration stream (incoming to other workspaces).

Traceability

- Change sets get attached to work items
- Get included in builds

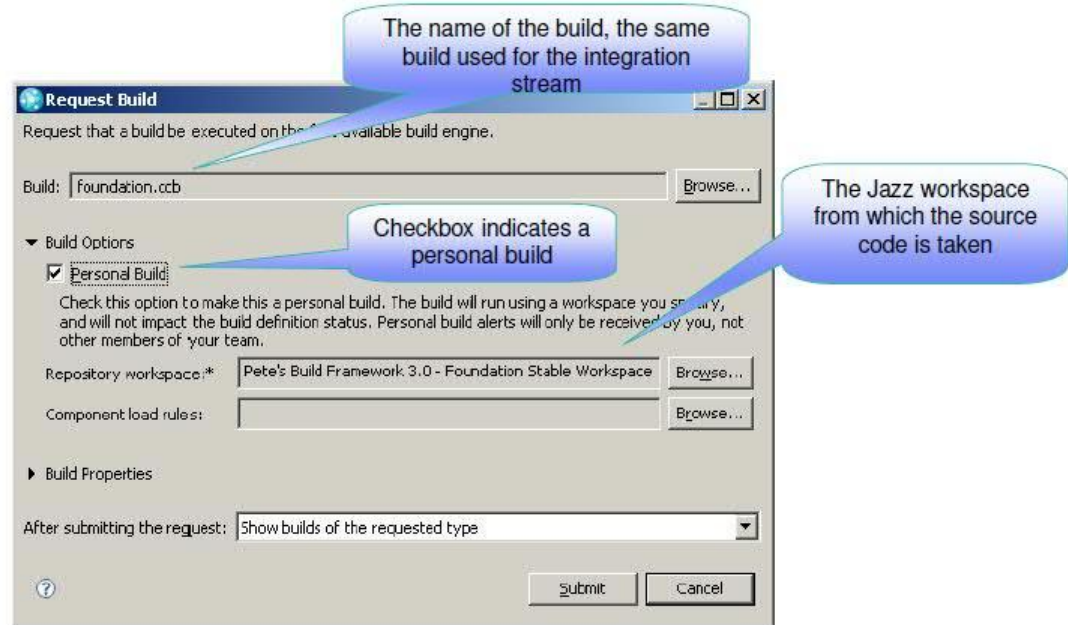
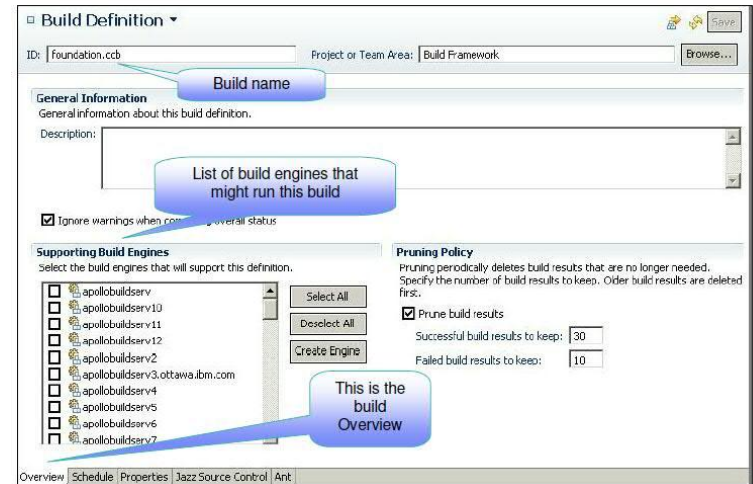


Isolation Levels – Parallel development with SCM

- Repository workspaces – Provides **individual** isolation
 - you don't have to make your changes visible to the team to:
 - backup or use the repository features.
 - collaborate on a change with someone else
- Streams – Provides **team** isolation.
- Suspend and Resume – Provides **task** level isolation for personal work.
- Team areas – Provides **process** isolation.

Continuous Integration with builds

- Setting up a Jazz build
 - The build has its own workspace, just like a developer’s workspace.
 - There is script to do the actual build
 - The build produces the artifacts and run the automated tests
 - The build runs on an build machine
 - Schedule the build
- Request build
 - Personal builds



Continuous Integration with build

- Validate
 - Automated builds
 - Unit tests
- Each Team
 - Owns their builds
 - Monitor the status of the builds
- A Developer
 - Personal builds

Build results view

The build result for the highlighted build is displayed in its own view

Build	Label	Progress	Estimated Co.	Start Time
foundation.ccb (personal build by David Olsen)	RJF-T20091030-2030	Completed		October 30, 2009 8:30:46 PM
foundation.ccb (personal build by David Olsen)	RJF-T20091030-1609	Completed		October 30, 2009 4:10:01 PM
foundation.ccb (personal build by David Olsen)	RJF-T20091030-1552	Completed		October 30, 2009 3:52:40 PM
foundation.ccb (personal build by David Olsen)	RJF-T20091030-1405	Completed		October 30, 2009 2:09:07 PM
foundation.ccb (personal build by Peter Steinfeld)	RJF-T20091030-1257	Completed		October 30, 2009 12:57:08 PM
foundation.ccb (personal build by Peter Steinfeld)	RJF-T20091030-1152	Completed		October 30, 2009 11:52:39 ...
foundation.ccb (personal build by Peter Steinfeld)	RJF-T20091030-1132	Abandoned		October 30, 2009 11:32:43 ...
foundation.ccb (personal build by Simon Archer)	RJF-T20091030-1002	Completed		October 30, 2009 10:02:55 ...
foundation.ccb (personal build by Peter Steinfeld)	20091030-1002	Completed		October 30, 2009 10:02:41 ...
foundation.ccb (personal build by David Olsen)	RJF-T20091030-0911	Completed		October 30, 2009 9:11:11 AM
foundation.ccb (personal build by Simon Archer)	RJF-T20091030-0803	Completed		October 30, 2009 8:03:16 AM
foundation.ccb (personal build by David Olsen)	RJF-T20091030-0736	Completed		October 30, 2009 7:36:20 AM

A check mark means the build succeeded

A red "X" means the build failed

Build foundation.ccb RJF-T20091030-1609

✓ **Completed**

Duration: 1 hour, 15 minutes, 59 seconds
 Start Time: October 30, 2009 4:10:01 PM
 Completed: October 30, 2009 5:26:00 PM

Status Trend: [Progress bar showing 100% completion]

Contribution Summary

- Downloads: [9 downloads](#)
- External Links: [2 links](#)
- Logs: [10 logs](#)
- Snapshot: [foundation.ccb_20091030-1609](#)
- JUnit: [5317 tests, 22 failures, 3405 errors](#)
- Repository Workspace: [BuildFoundationExperimental](#)
- Work items: [1 included in build](#)
- Changes: [Show changes](#)

General Information

- Reported by: (scheduled build)
- Build Definition: [foundation.ccb](#)
- Build Engine: [foundation.ccb.cbld19](#)
- Build History: [46 builds](#)
- Test results: Deletion allowed

Link to the artifacts produced by the build

Log files produced by the build

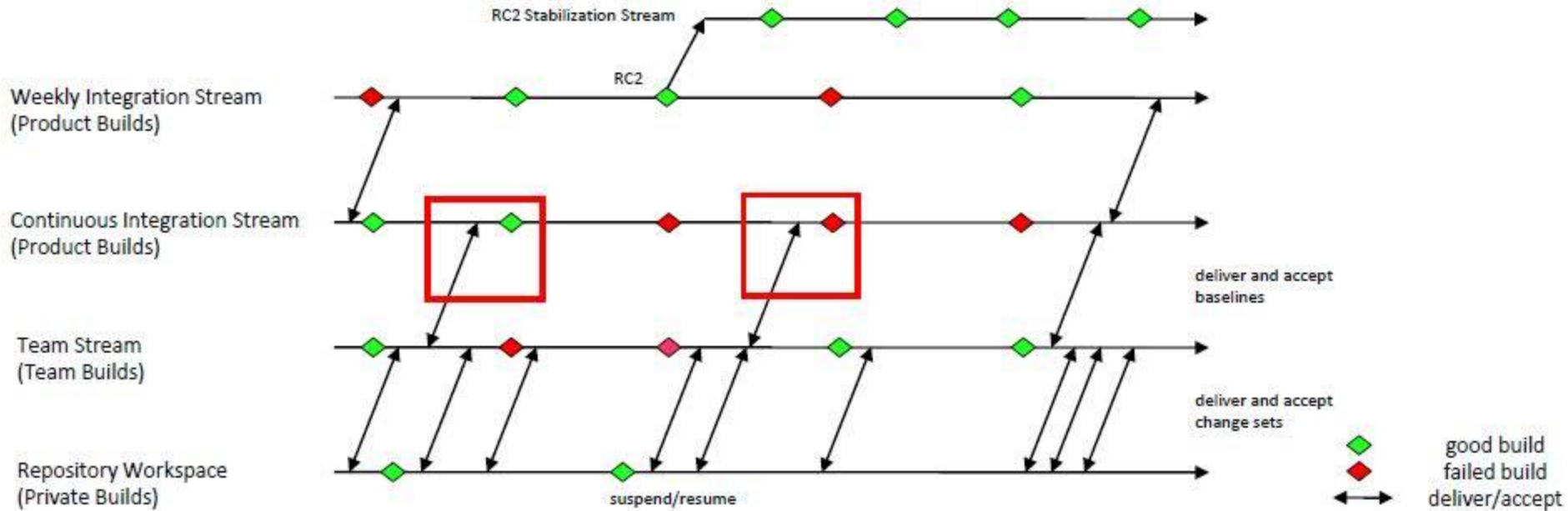
The snapshot captures the exact file versions used in the build

Test results

The name of the build's Jazz workspace

Changes delivered since the last build

Multi-level Continuous Integration

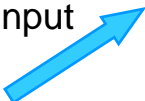


Transparency with Feeds, Dashboards, Reports

- Transparency
 - self-organized teams
 - monitor real time progress
 - stakeholder input
- Feeds
 - Event notifications
 - Associate with teams
 - Up to date
- Dashboards
 - Live project status
 - For all stakeholders
- Reports
 -

The image displays three screenshots of the Rational Team Concert (RTC) software interface, illustrating its transparency features:

- Top Screenshot (Feeds):** Shows a 'My Teams in Rational Team Concert' feed with a list of recent events. Items include 'Martha DasSarma delivered 3244foundation.stable.jcb-RJF-120101130-1700 to 'RelEng RTC-RTC Integration'', 'Team Area created: ClearCase Connector', and 'Team Area created: ClearQuest Connector'. It also shows events from 'Yesterday' such as 'Team Area created: Install' and 'Filter for the home page "Project area" to reduce the number of projects to display (141085)'.
- Middle Screenshot (Dashboards):** Shows the 'RTC Development' dashboard. It includes sections for 'Open vs Closed Work Items' (with a line chart), 'Metrics' (listing criteria like 'Verify the QCert numbers for your component'), 'Quality Metrics' (with a list of items like 'RTC Overall' and 'Component teams'), and 'Tracking' (with a bar chart showing 'Closed', 'Verified', 'Resolved', and 'New' items).
- Bottom Screenshot (Reports):** Shows a 'Burndown' report. The chart plots 'Hours' on the y-axis (0 to 3,500) against dates on the x-axis (9/13/10 to 10/13/10). It features three lines: 'Remaining Work' (blue circles), 'Planned Work' (grey line), and 'Ideal' (orange line).



Agile Planning

- Type of plans determined by process
 - Product backlog
 - Release Plan
 - Iteration Plan
- Real time planning
 - Plans reflect your team’s progress

JUnit Release Backlog - Rational Tea...

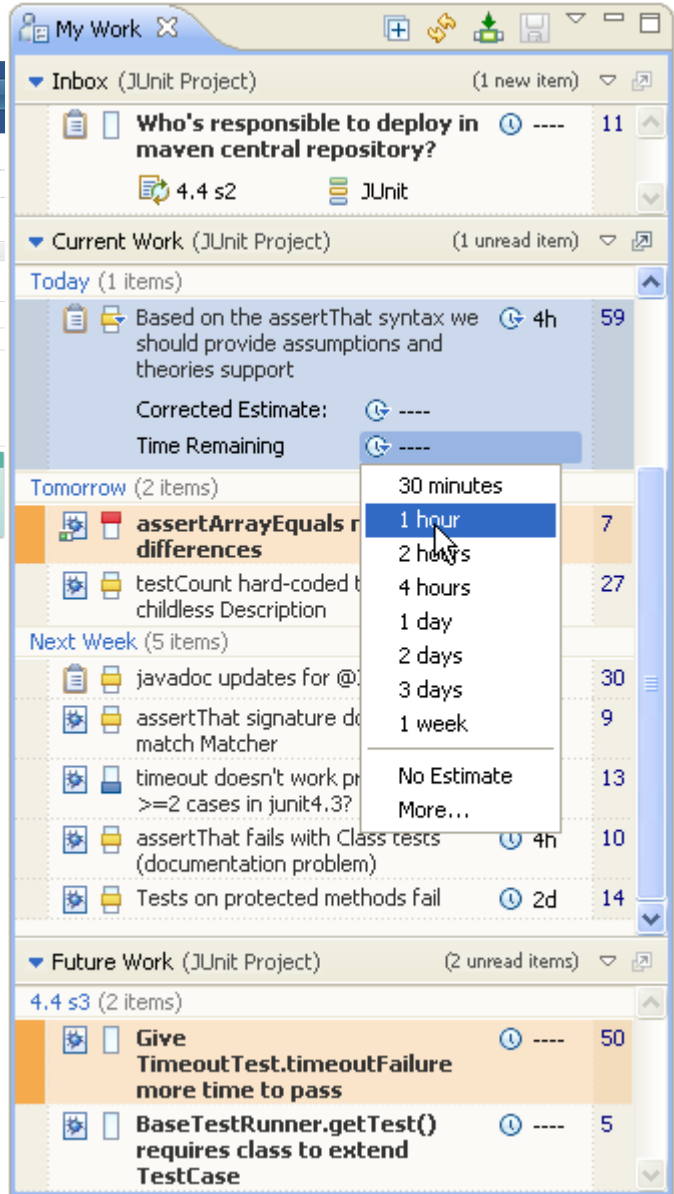
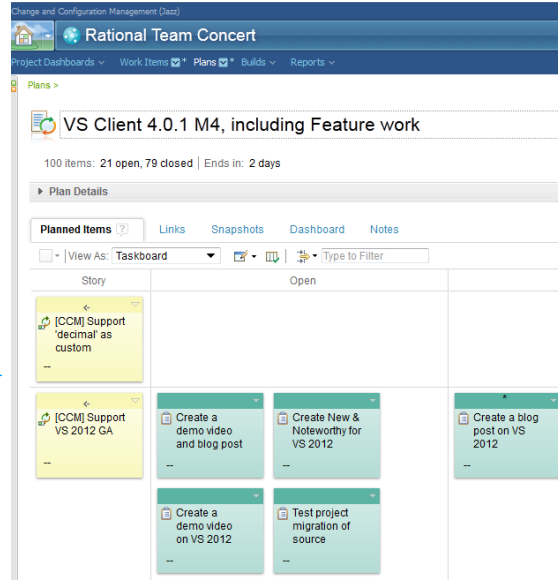
Planned Items | Links | Snapshots | Notes

View As: Iterations

Actions	Summary	Story Points	Effective Estimate	Progress	Rank
4.4 Closed Items: 11 Open Items: 16 Progress: 13.5/186.5 h Estimated: 63%					
	Provide improved Assertion syntax	20 pts	--	0/16 h	5
	Give TimeoutTest.timeoutFailure more time to pass	--	--	0/0 h	9
<input checked="" type="checkbox"/>	No download link to latest version	--	--	0/0 h	23
	BaseTestRunner.getTest() requires class to extend TestCase	--	--	0/0 h	26
4.4 s1 Closed Items: 1 Open Items: 0 Progress: 0/0 h Estimated: --					
4.4 s2 Closed Items: 10 Open Items: 12 Progress: 13.5/186.5 h Estimated: 75%					
	assertEquals throws NPE while comparing null elements	--	3 weeks	0/120 h	2
	assertArrayEquals misses differences	--	2 hours	0/2 h	3
	testCount hard-coded to 1 for childless Description	--	--	0/0 h	4

Agile Planning Contd

- Planning for teams
 - Release plan
 - Iteration Plan
 - Plan editor
- Planning for individual
 - My work view
- Plans are visible to stakeholders



Retrospectives

- Teams reflect on what worked and what didn't
- How to tune the process
- PMC retrospective summarizes team retrospectives
 - Defines actions for the PMC

Retrospective 197779 📄 🗨️ 📅 📌

Summary: 📄 Finished

Details

Type:

Creation Date: Feb 22, 2012 2:43 AM

Created By: [James Stuckey](#)

Team Area: [RTC / PMC \(Private\)](#)

Filed Against:

Owned By:

Planned For:

Due Date:

Resolution Date: Mar 14, 2012 3:59 PM

Resolved By: [Sreerupa Sen](#)

Quick Information

👤 Subscribers (7): CM, CC, JS, KUM, KK, LNV, MA

📁 Parent: 197770

📄 Copied From: 197770

Agenda

Goals

- * Reflect on the RTC 4.0 M8 and RCO development efforts
- * Consider what the team accomplished
- * Identify what worked well at both the team and project level

Summary

Big ticket items that the team achieved

- Beta for all the clients

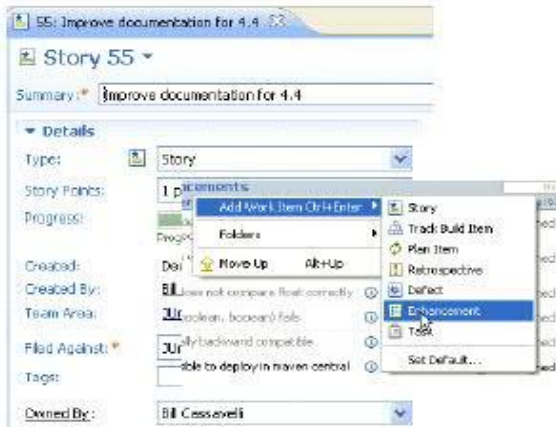
What worked well

- The beta demos went well and were well received.
- Most of the MSSCCI work got completed in M8/RCO. The discussions we've had with the [Rhapsody](#) team proved to be very helpful, so did the testing they did for us.
- CLI team could defect a bunch of important fixes in RCO especially w.r.t help [texting](#). It looks more professional now.
- Vandana's testing helped a lot especially the stack traces helped us reproduce and fix a lot of defects in the shell client.
- The SCM Core team took on the brunt of the server rename work and that somewhat reduced the work in the downstream clients.
- Feedback from the SCM team on the Shell client has been really helpful.

Overview | Discussion | Links | History

Rational Team Concert –A single tool, many capabilities

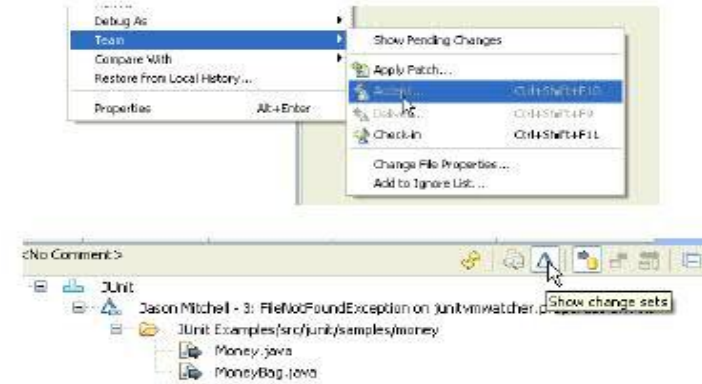
Work Items



Planning



Source Control



Builds – Continuous Integration



Dashboards & Reporting



Method Enforcement and Automation



- Quality of releases improves 12%*
- Project governance improvements of 12%

- Team productivity increases of up to 50%
- Team collaboration performance up 25%*

QUESTIONS

www.ibm.com/software/rational



For more information on Rational Team
Concert visit jazz.net.

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