Collaborative development using Rational Team Concert

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"As Presented by Bernie Coyne and Rolf Nelson in Innovate 2010 at Orlando".

Innovate2010

The Rational Software Conference

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The premiere software and product delivery event.
August 17–18 Bengaluru, India

Agenda

- What is Application Lifecycle Management?
- What is the Jazz Platform
- What is Team Concert?
- More Information
- Summary

Driving Business Differentiation

What is application life-cycle management?

Co-ordination of development life-cycle activities:

- Managing evolving requirements
- Improving alignment to business objectives
- Accelerating change and delivery
- Delivering enduring quality
- Improving lifecycle traceability of work

What does ALM really mean?

- Automating your software development process
- Keeping activities in sync via traceability of work
- Reporting on overall project progress
- Integrations between activities is a key part of ALM
- Having several life-cycle tools is not necessarily an ALM

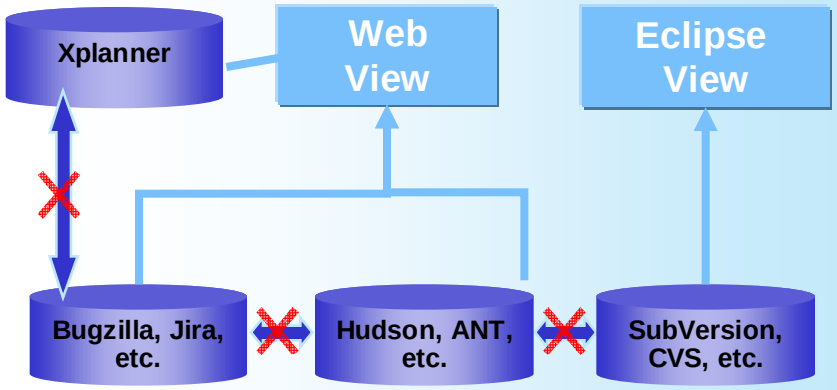
Managing dependencies between high-priority change requests and ongoing application development efforts "sometimes seems like it isn't humanly possible." (US healthcare company)

Are you struggling to build ALM from "free" point products?

Brittle integrations, multiple UIs, multiple logins, security models and process models

And if you finally get it "working", then it breaks each time a new plug-in releases!

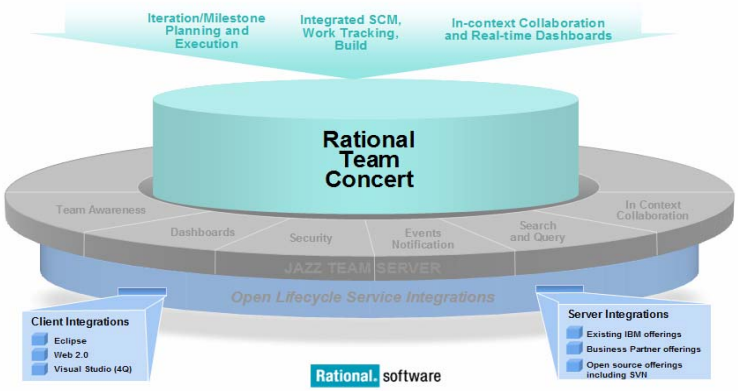
Point Product Tools



Point Solutions for individual productivity

- Significant costs to maintain and administer federated databases
- No concept of project, teams or schedules
- No single, consolidated view into project status and health
- SCM, work items, build functionality unaware of each other providing little to no insight into relationships between artifacts
- Different logins, different security models, brittle and limited integrations break from release to release

Increased productivity with Rational Team Concert



Fully integrated collaborative application lifecycle management solution

- ✓ Designed for agile and distributed teams
- ✓ Fully aware of projects, team process, team composition, who's doing what and by when, in-context collaboration with instant messaging discussions, discussion threads kept with work items
- ✓ All-in-one solution for the core development team with planning, SCM, work items, workflow, build management, dashboards and reporting fully integrated
- ✓ Single download package, easy to install and get started, minimal administration, easy startup of projects, onboarding and offboarding of team members quickly

Are you struggling to build ALM from commercial point products?

Brittle integrations, multiple UIs, multiple logins, security models and process models

And if you finally get it "working", then it breaks each time a new point product releases!

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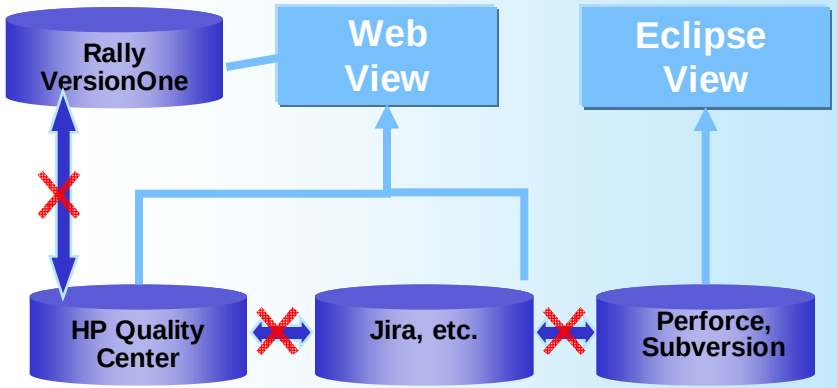

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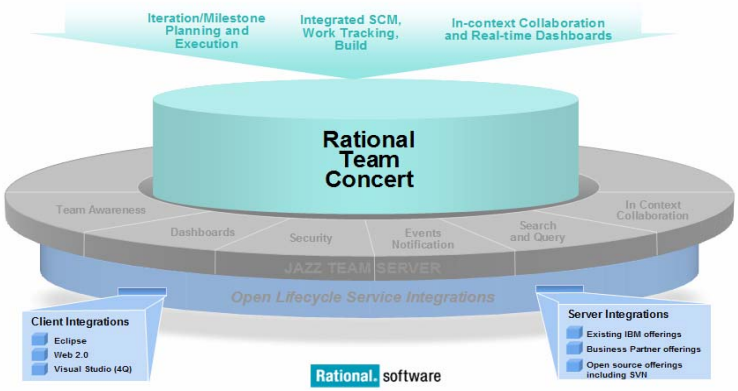

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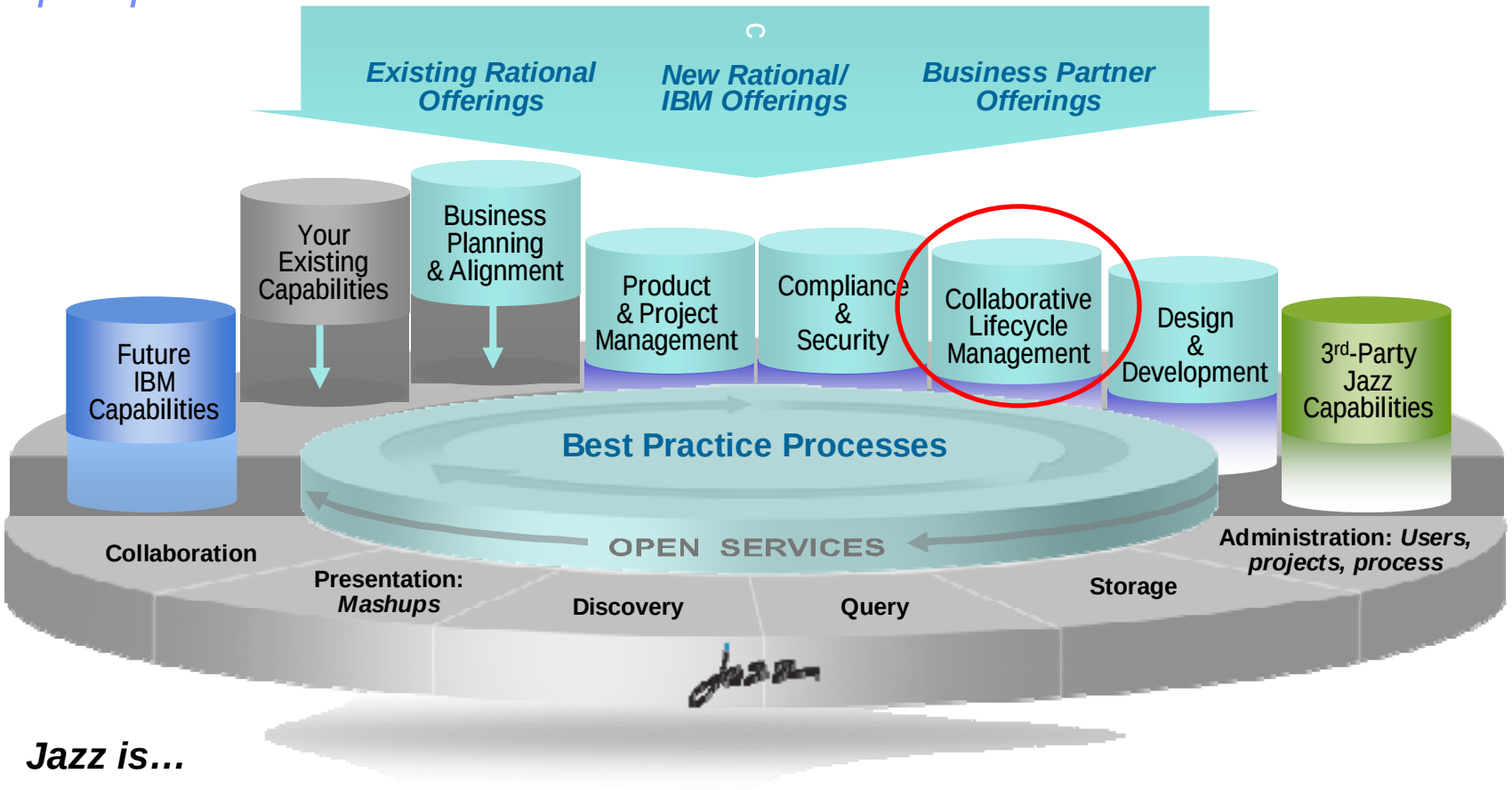
Rational Team Concert is based on Jazz

an open platform with a shared set of services



Jazz is…

- A scalable, extensible team collaboration platform
- A community at Jazz.net, where you can see Jazz-based products being built
- An integration architecture, enabling mashups and non-Jazz based products to participate

Rational Team Concert: A Closer Look

Agile Planning

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

Project Transparency

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

SCM

- Integrated stream management
- Component level baselines
- Server-based sandboxes
- Identifies component in streams and available baselines
- SVN, Git, CC bridge, connector

Work Items

- Defects, enhancements and conversations
- View and share query results
- Support for approvals and discussions
- Query editor interface
- ClearQuest bridge, connector

Build

- Work item and change set traceability
- Build definitions for team and private builds
- Local or remote build servers
- Supports Ant and command line tools
- Integration 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

Team Concert works with the tools you use today!

More information: http://jazz.net/projects/rational-team-concert/integrations/

- Visual Studio IDE, Eclipse IDE's, Wind River
- ClearCase, Subversion and Git Bridges
  - If you plan on keeping your source files in Subversion, then you can use Jazz Work Items and Planning and link them to your Subversion commits.
  - See: https://jazz.net/wiki/bin/view/Main/SCMSubversion
  - See: http://jazz.net/library/article/194
- ClearQuest Bridge
  - Keep your ClearQuest data in place and access it from Rational Team Concert
- RTC Adaptor for HP Quality Center (3rd party)
  - **BSD Group** - Rational Team Concert Adaptor for HP Quality Center keeps Quality Center defects and Rational Team Concert work items in sync.
- Build Forge, Maven, Hudson, Cruise Control
  - The RTC build engine is extensible and can link to Team Concert build health reports
- Tasktop Mylyn integration (coming soon to www.tasktop.com)
  - See only the code and web content relevant to your task
  - Get one-click multitasking and interruption recovery

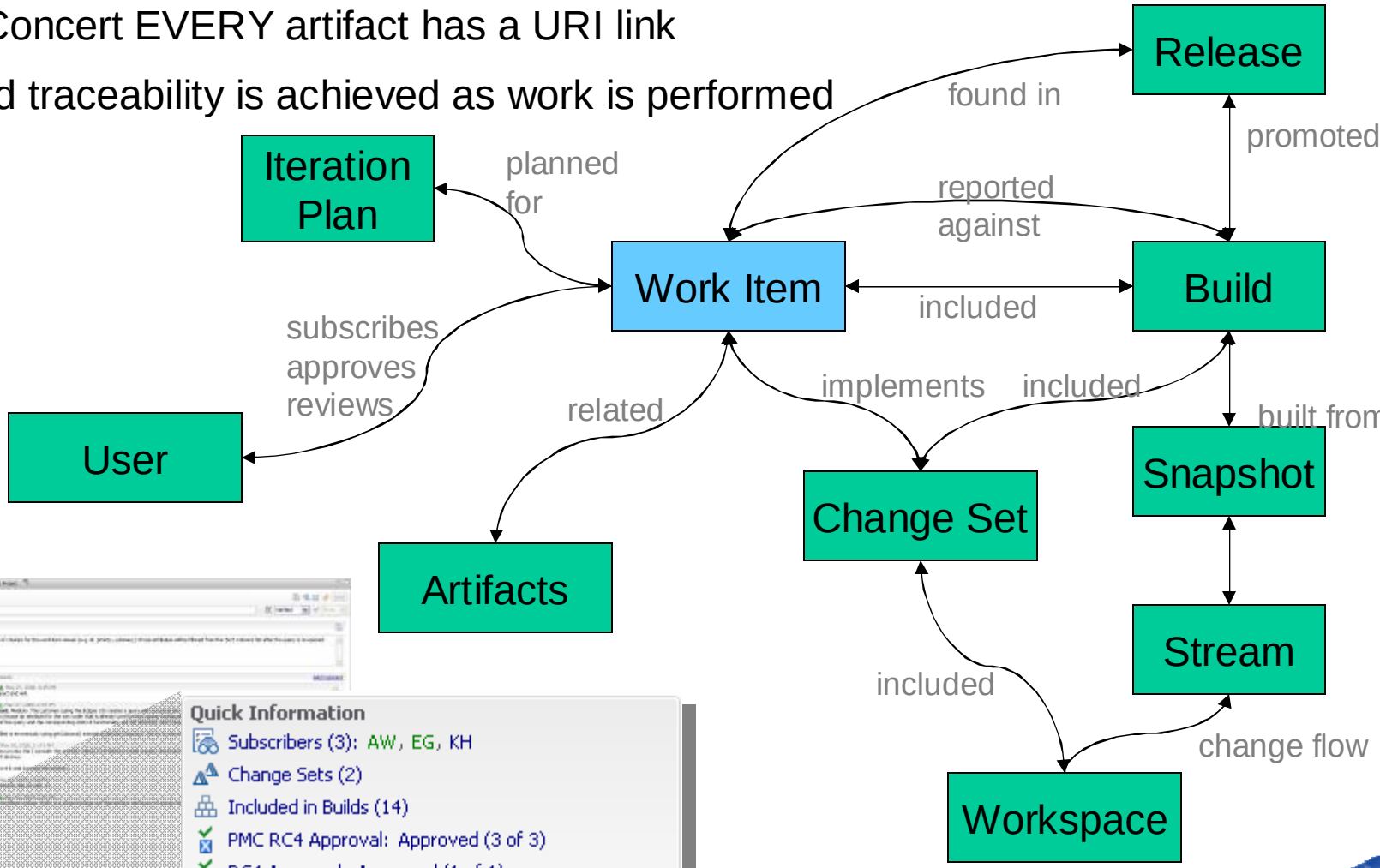
What if my development tools provided…

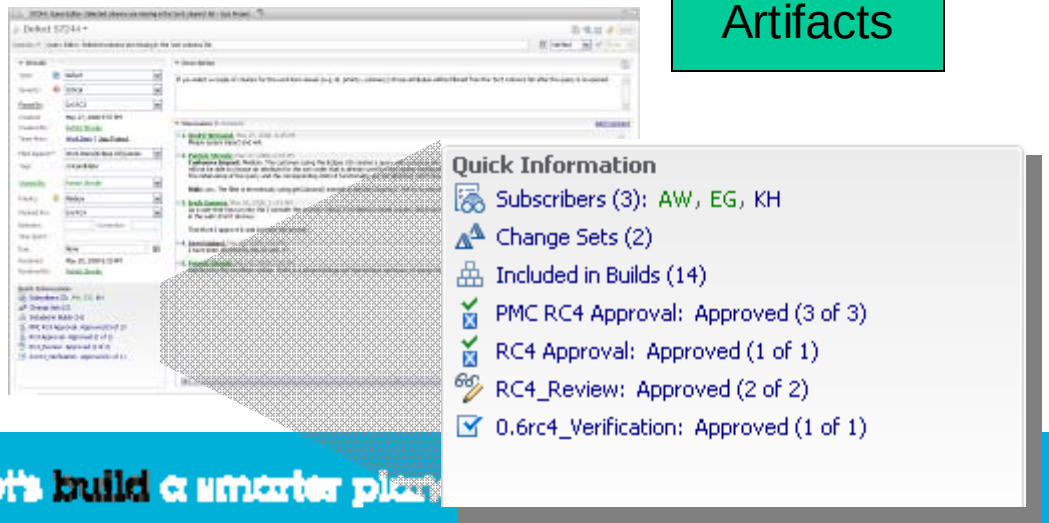
- *Built in Collaboration:*

"What if teams could seamlessly collaborate around all development artifacts (plans, tasks, change sets, builds) in one place?

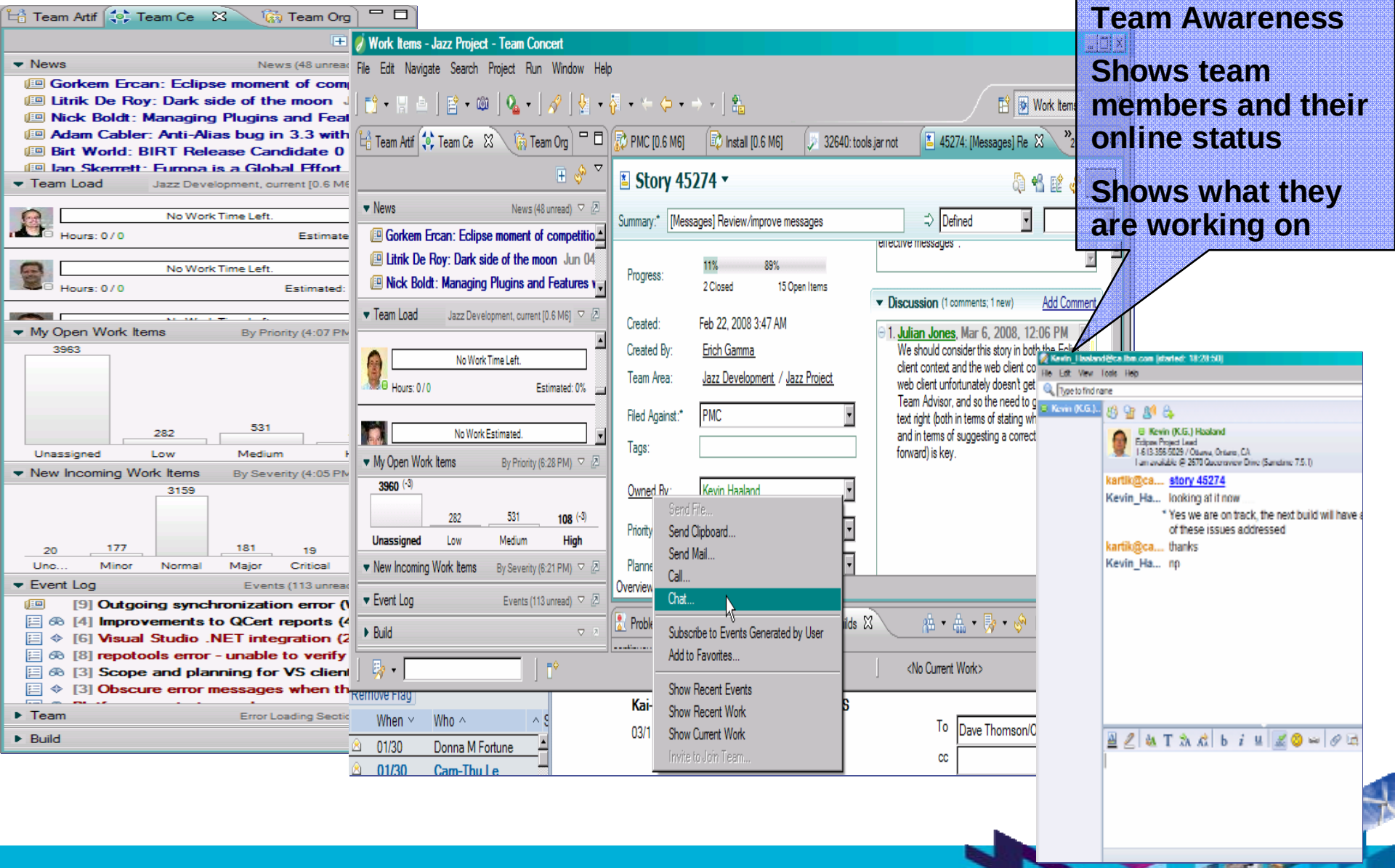
Automated Traceability using URI links

- In Team Concert EVERY artifact has a URI link
- Automated traceability is achieved as work is performed





In-context collaboration

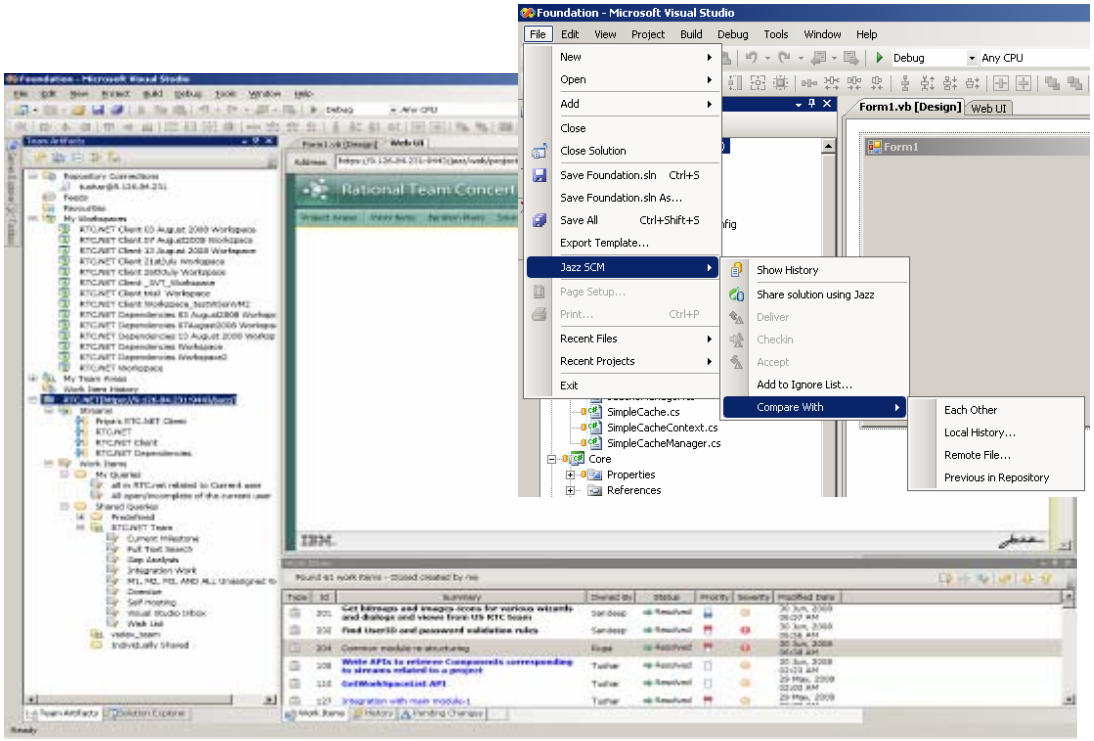


Extend team collaboration to Visual Studio developers

Rational Team Concert client for Microsoft Visual Studio IDE

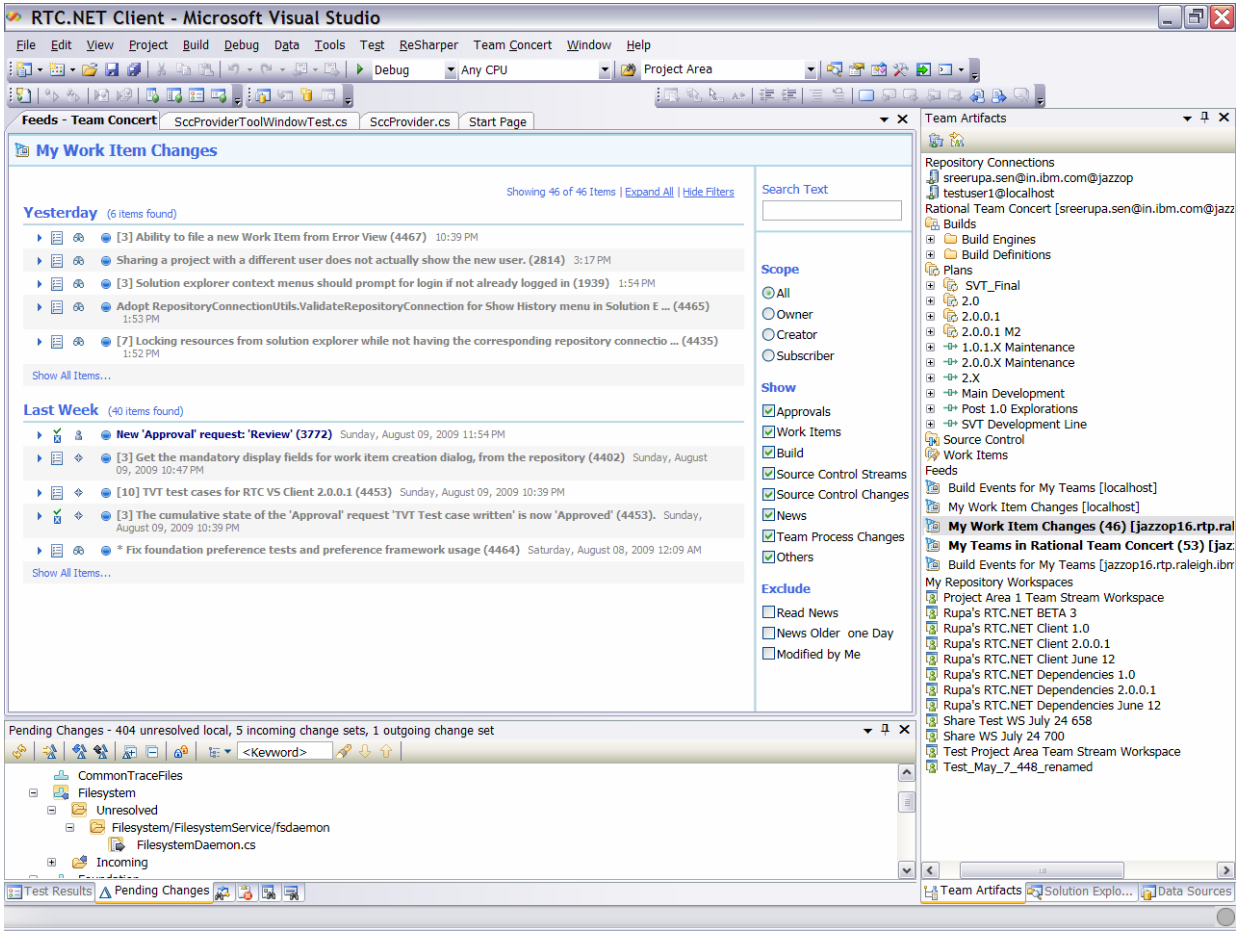
- **Unify Software teams**
  - ✓ Manage Change across development environments
  - ✓ Common process for both development teams

    (.NET and J2EE)
  - ✓ Cross platform team collaboration
    - ✓ Common Work items
    - ✓ Source Code Management
    - ✓ MS-Build support
    - ✓ View build logs/status
    - ✓ RSS feeds/events
    - ✓ Agile Planning support



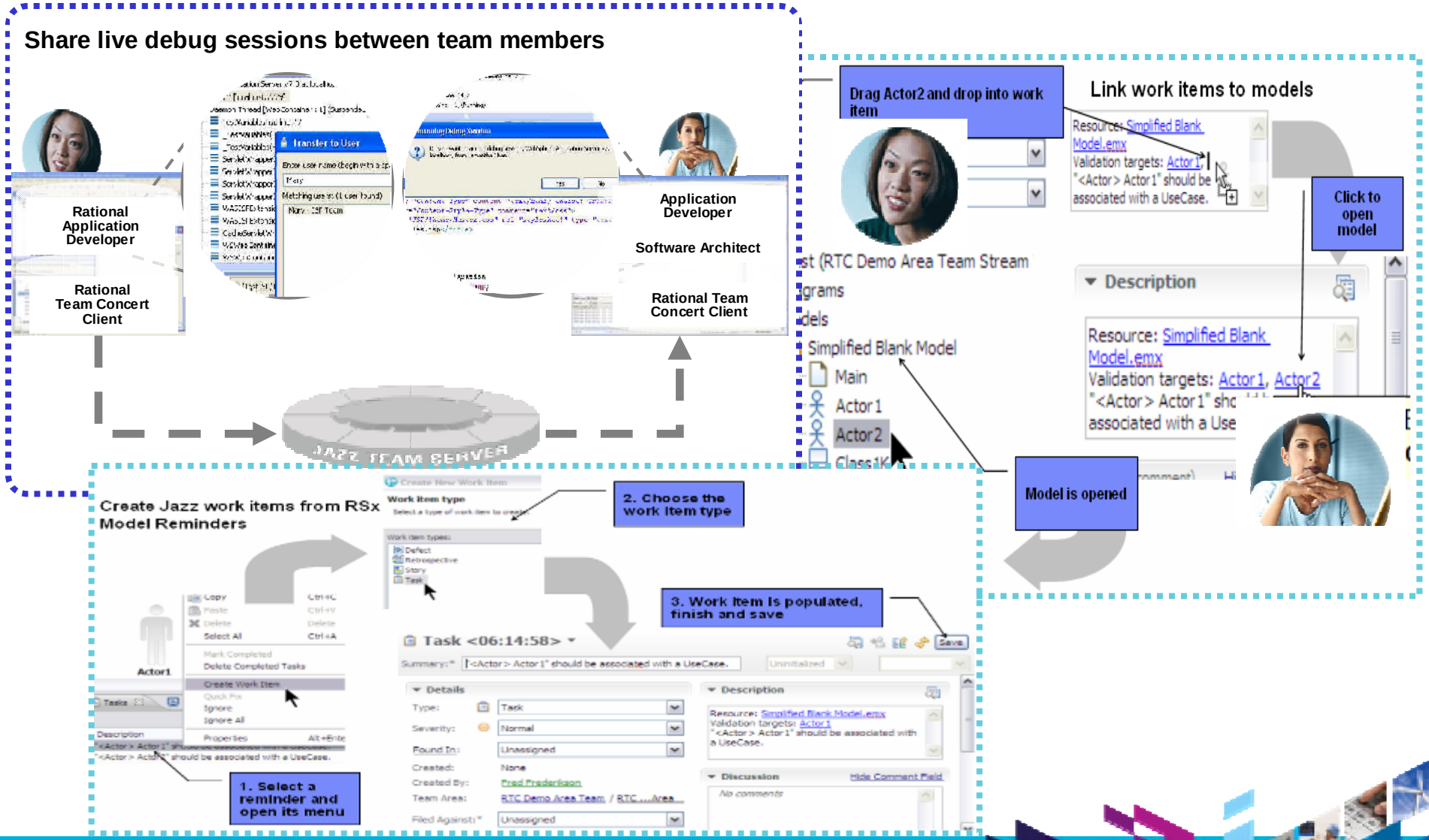
Issue: How does the team communicate changes and facilitate discussions? Solution: Subscribe to specific events across any team via RSS feeds; In-context collaboration around artifact links,

- Create feeds for
  - work items, queries
  - builds, build definitions
  - team events
- A consolidated view of events in your team area/project area
- Feeds are available in both the Visual Studio and Eclipse IDE



Collaborate using Rational Application Developer, Modeler, Architect

Never work alone, even if your teammates are across the world with Rational Team Concert



What if my development tools provided ….

- *Automated Project Status:*

"What if all my development plans and status were linked directly to development execution so we could spend our time developing software and not stopping to report on project status?"

Issue: Determining Project Status Across Teams
Solution: Progress Status Bars at Individual and Team Level

Support BOTH “tops-down” and “bottoms up” planning.

Make it very easy for developers to estimate and size tasks by allowing estimation directly in their IDE of choice

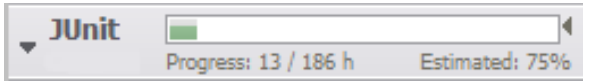
If they have to jump into another planning tool or spreadsheet they are much less likely to estimate their tasks.

Enables Automated Progress Bars at the individual and component team level.

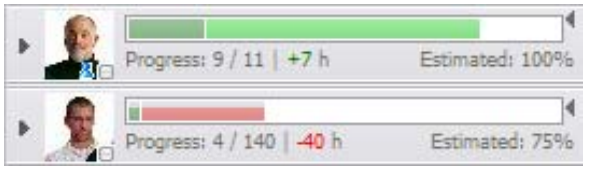
Automated Load Bars to ensure workload balancing

You need tooling support to automate both a “burndown” view but also daily progress toward task completion.

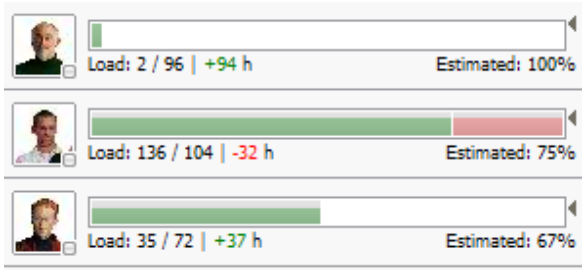
Team Progress Bar



Individual Progress Bar



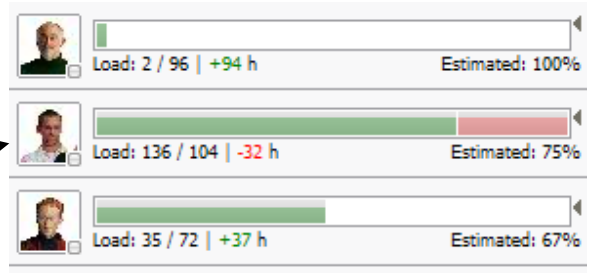
Individual Work Load Bar



Team Concert Planning is Directly Linked to Execution

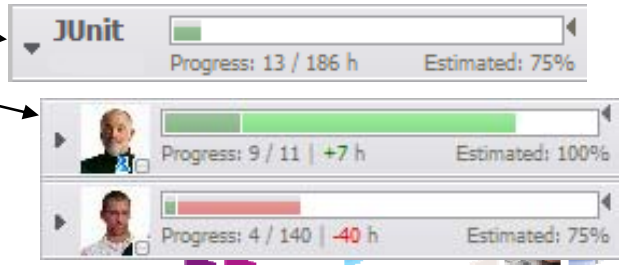
- NOT just a disconnected spreadsheet
  - With brittle cross product integration
  - Synchronization issues for admins…backup
  - No web access for non-developers
- NOT just a planning tool
  - Designed for project leads
  - Not connected to execution of scm and builds
  - No process control of scm, builds

Work Load Bar

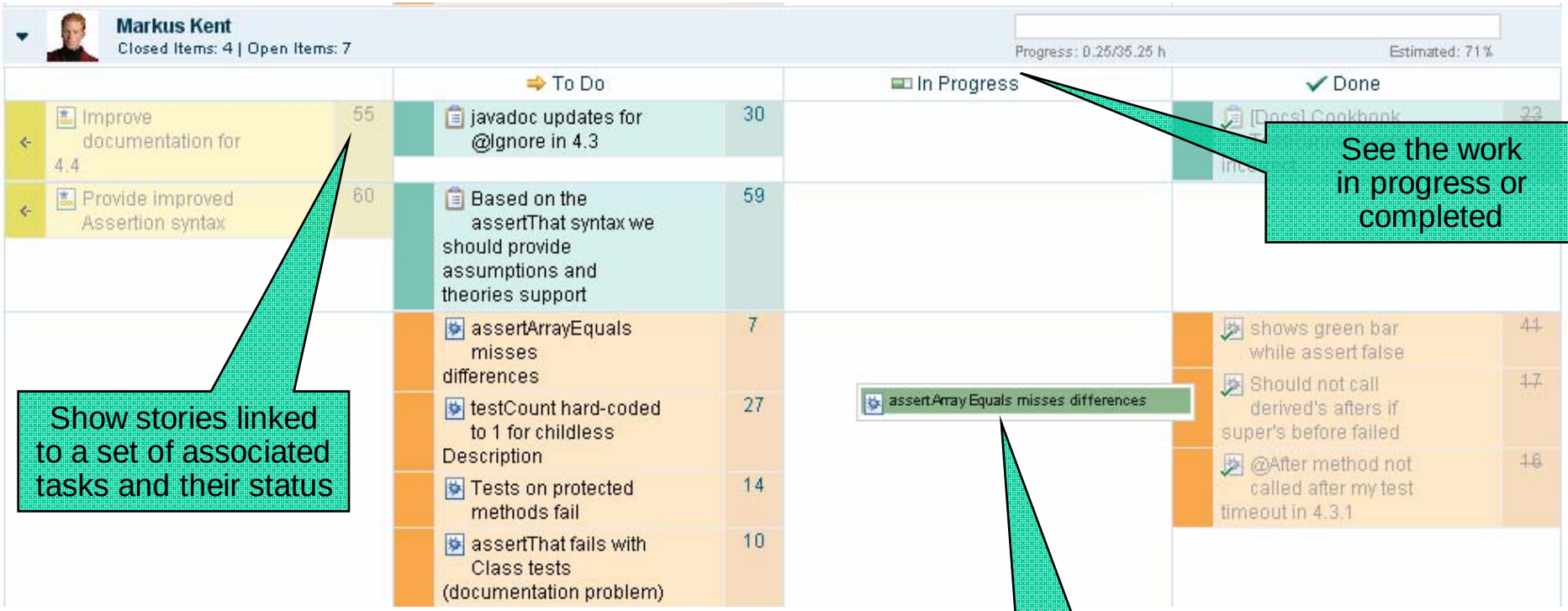


- With Rational Team Concert
  - Live work load bars show who is overbooked …
  - Live progress status bars show Individual and Team progress
  - All planning is 100% Web based so all can access it
  - Full process control across both VS.NET and Eclipse teams
  - Engages development in planning to produce better predictability

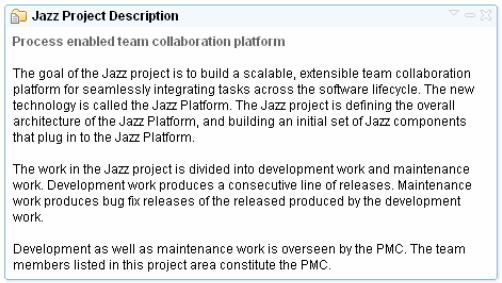
Progress Bar

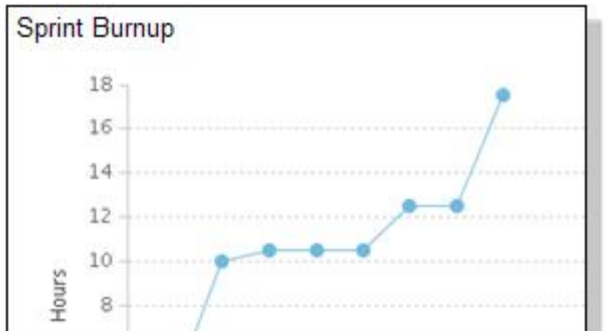


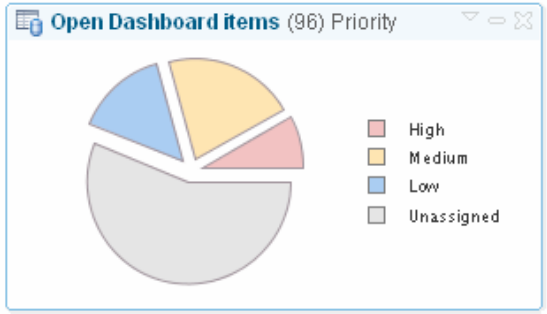
Issue: How to run daily standup meetings across locations?
Solution: Web based taskboards, increase distributed team visibility

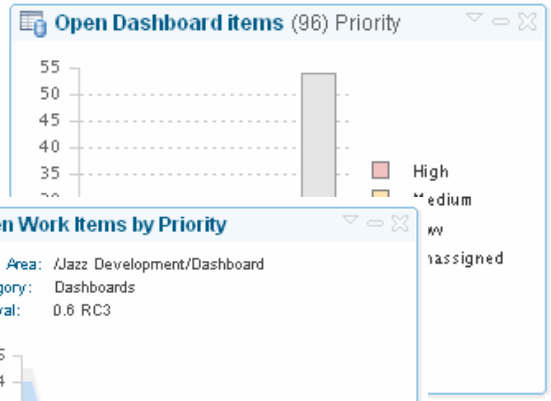


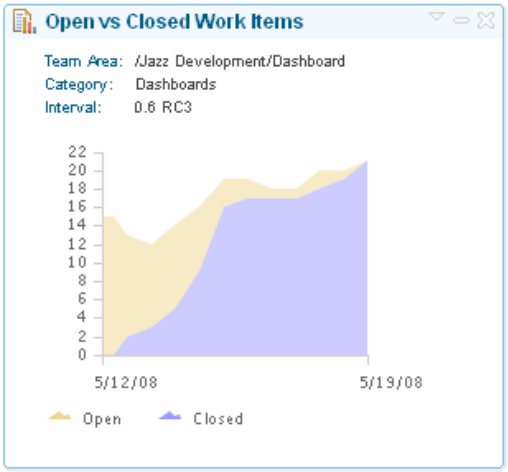
Issue/Risk: You Don't Have Effective Oversight
Solution: Web Based Project and Portfolio Dashboards

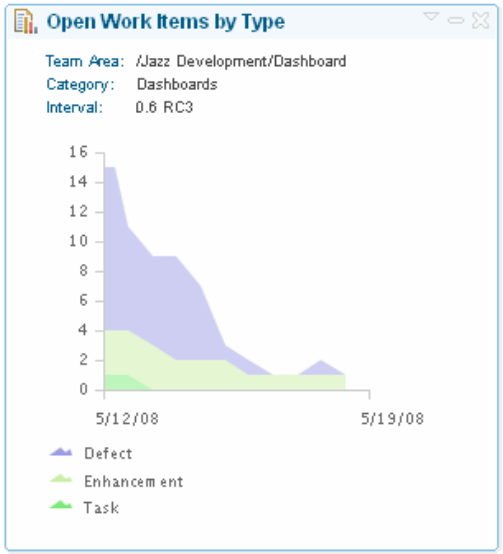


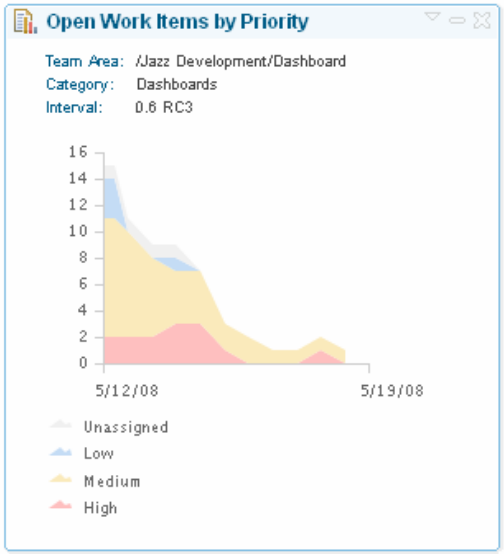


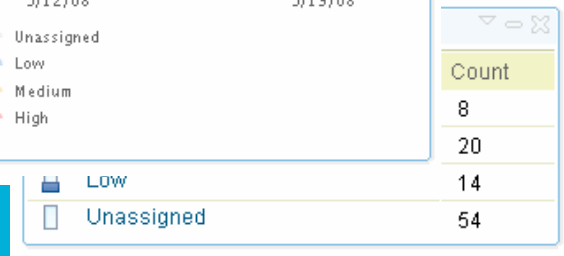










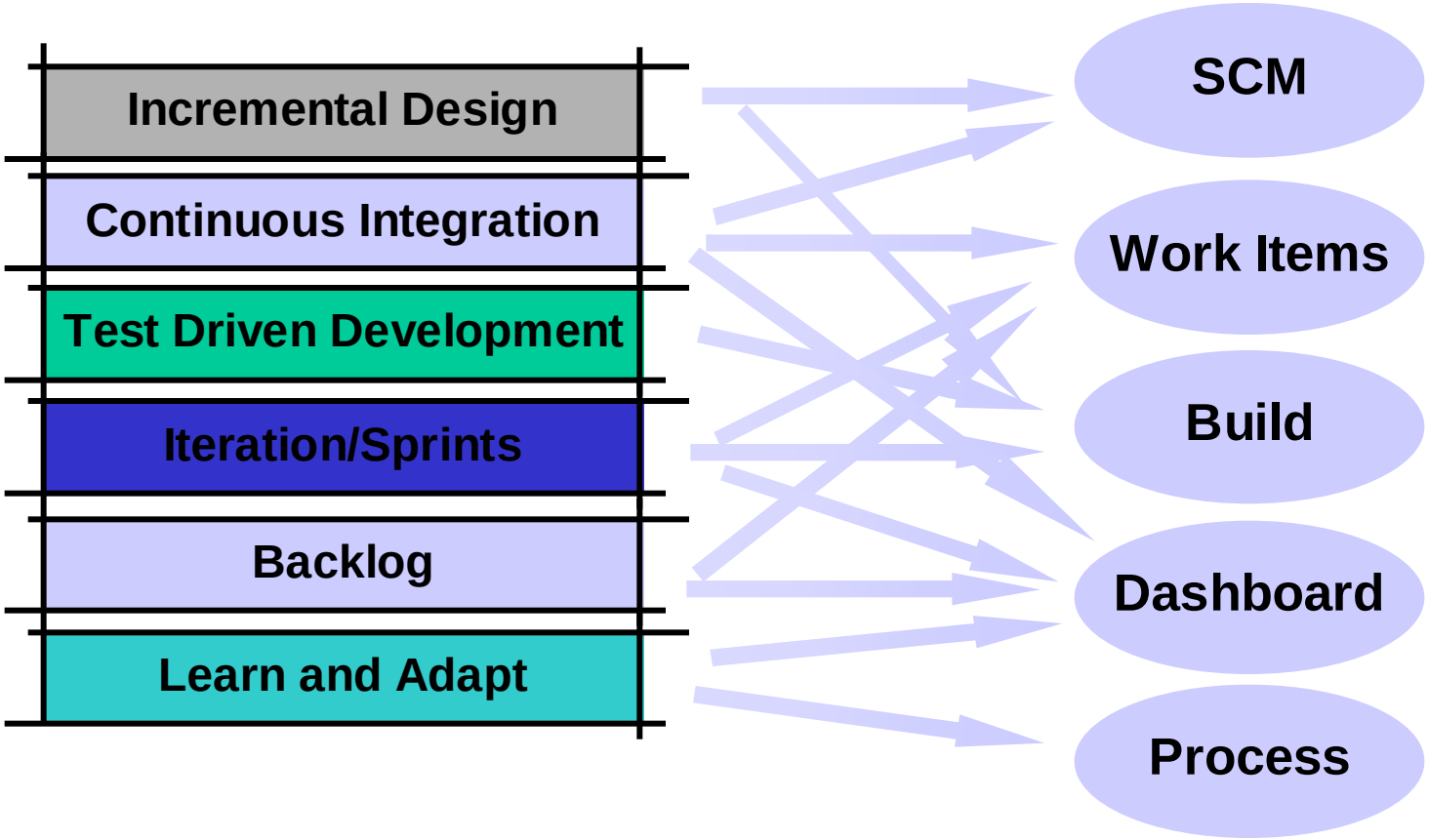


What if my development tools provided…

- *Automated Traceability,*

"What if I could stop struggling with limited and brittle integrations of my point development tools and instead rely on a unified development environment that automates traceability while I perform work?"

Development Best Practices Touch Many Functions

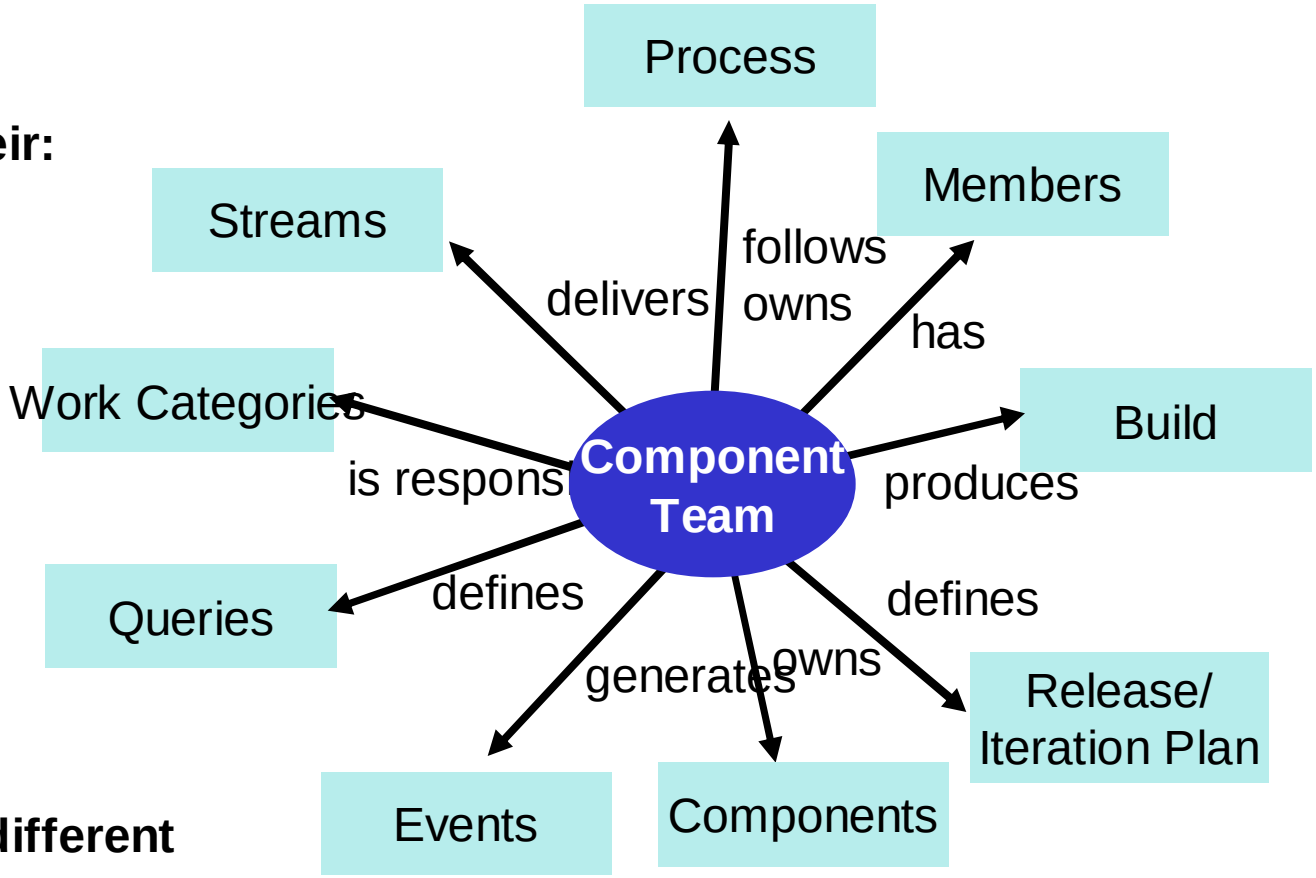


"....we currently use a mix of Subversion, Atlassian JIRA and the Hudson continuous build tool, and various extensions that provide some integration between these products. **As you might imagine, this causes problems as these tools are not as sophisticated as RTC, and require a careful migration strategy to keep the (limited) integrations working over time."**

Peter Hendricks Info Support Netherlands

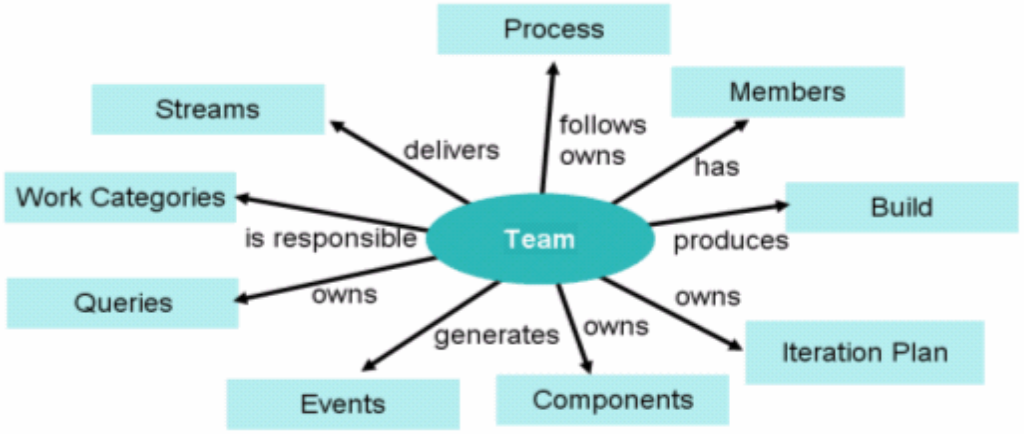
Team Autonomy vs. Control

- **Teams own their:**
  - Plans
  - Builds
  - Tests



- **Each Team is different**
  - Team has its own process and constantly tunes it
  - All teams agree on core practices
  - All teams share the same rhythm/iterations

Team of Team integration and control in Team Concert

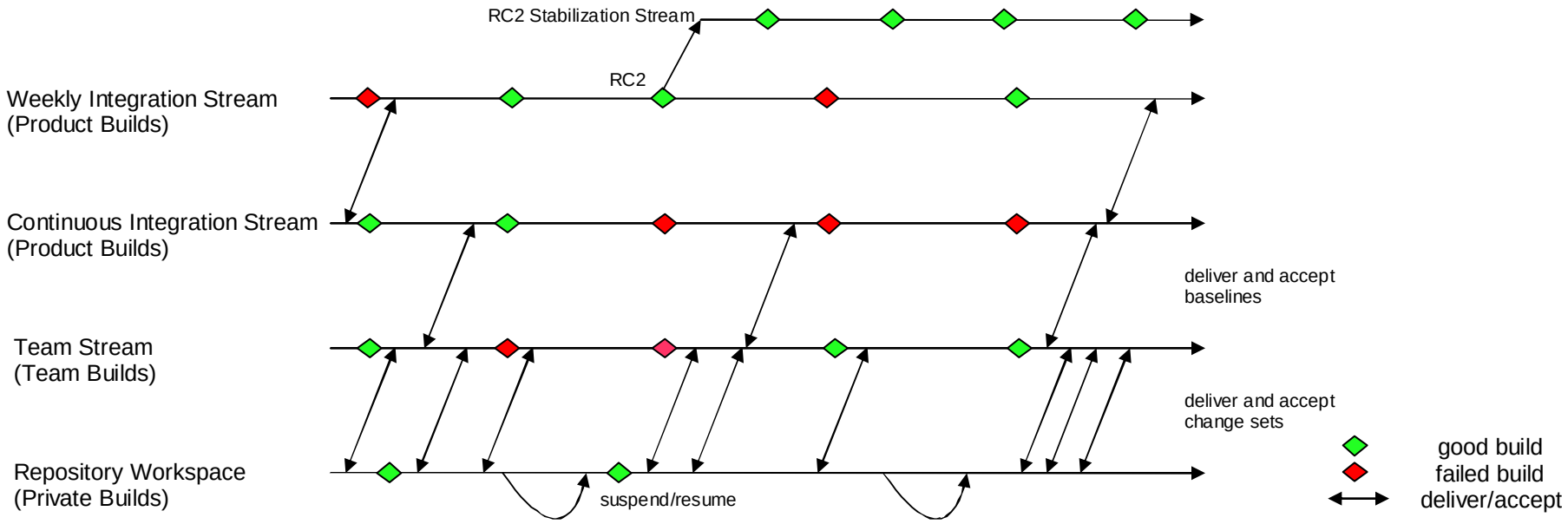


Isolation and Team Control

Integration of Multiple Teams

Isolate ***work*** not ***people***.
Encourage transparent planning and flexible isolation.

Issue: I have a complex multi-team project that rolls up into a system. How do I do continuous integration across the whole system?
Solution: Multi-level Staged Continuous Integration



- Developers deal mainly with accepting and delivering to their team stream. Flowing changes to and from the product and weekly integration streams provides multi-level staged continuous integration support across a complex system.
- Each build references a snapshot of the artifacts that were built. Reproducing a build or patching a build is as simple as creating a new stream from the snapshot.

Accelerate the ALM build-test-debug cycle

Integrated workflows speed defect time-to-resolution

Analyst

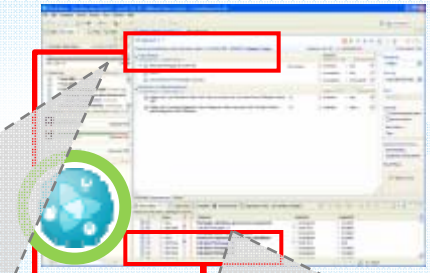
Rational Requirements Composer

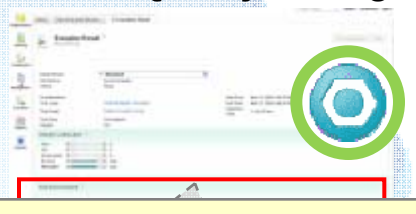
Developer

Rational Team Concert

Tester

Rational Quality Manager

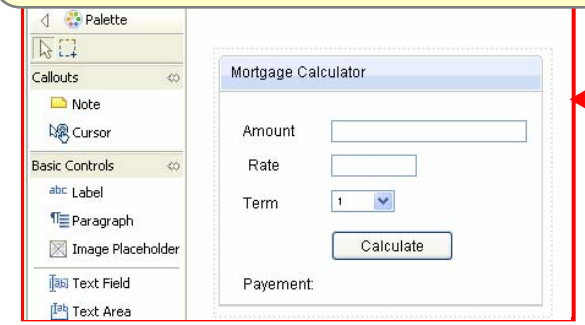


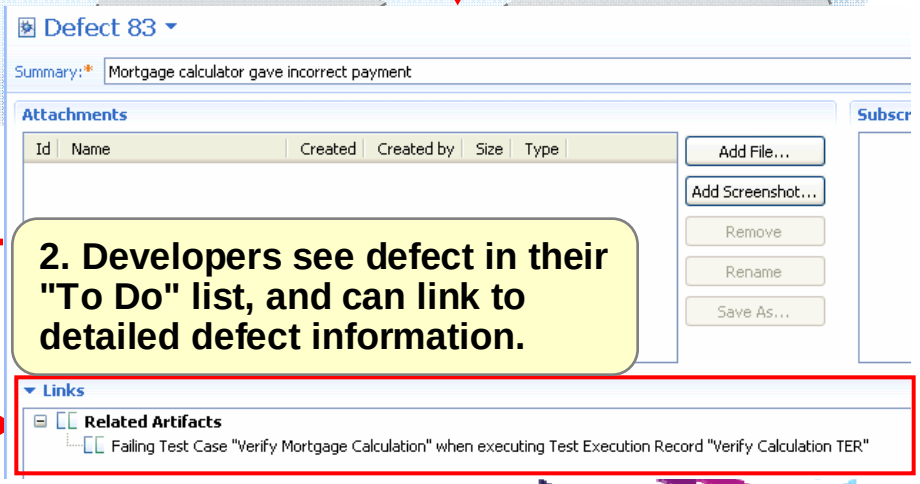


1. Tester captures test execution results and logs defect as a work-item.

2. Developers see defect in their "To Do" list, and can link to detailed defect information.

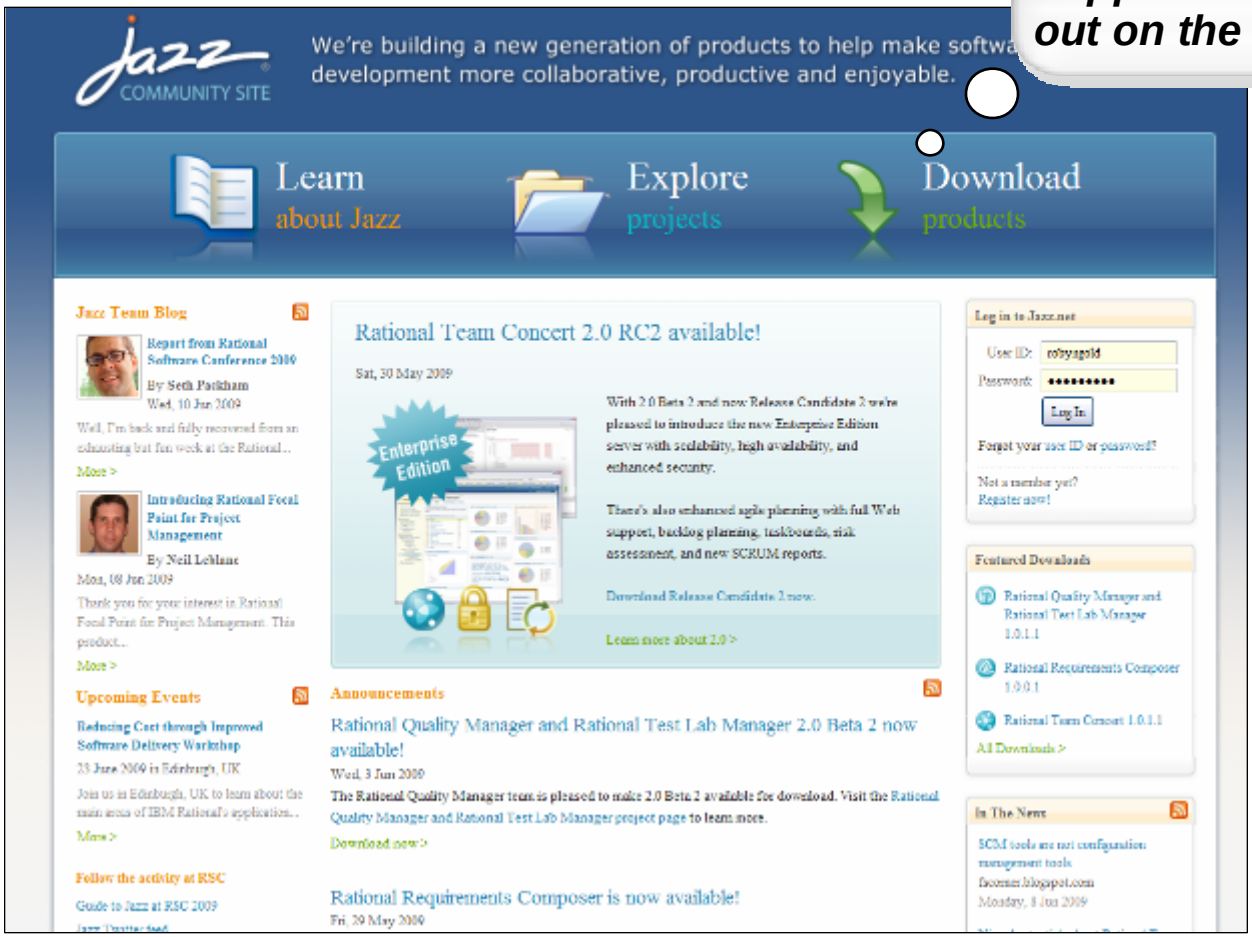
3. At any time, developers and testers can link to associated requirements.





www.jazz.net - Transparent development visibility

Suppose we did our development out on the Internet?



- A transparent software delivery laboratory where you can...
  - Communicate with the development team
  - Track the progress of builds and milestones
  - Get the latest product trials and betas
  - Join developers and product managers in discussion groups
  - Submit defect and enhancement requests

Executive Summary

- In today's presentation, we highlighted these key attributes of Rational Team Concert and the Jazz Platform
  - Rational Team Concert, built on the Jazz Platform, is open and extensible and supports Visual Studio, Eclipse, RDz, RDi (Cobol/RPG)
  - Rational Team Concert provides integrated end to end support of any development process
  - Rational Team Concert provides both planning and automated status to keep teams on track
  - Rational Team Concert provides unique, in context, collaboration among software developers
  - You can adopt Team Concert in an incremental way using your existing artifacts that reside in Subversion, Git, HP Quality Center, ClearCase/ClearQuest, etc…

More Information

- See a Demo of Rational Team Concert in action
  - http://jazz.net/projects/rational-team-concert/
- Learn More about integrations that exist with Rational Team Concert
  - http://jazz.net/projects/rational-team-concert/integrations/
- Get Started with 10 FREE developers with RTC Express-C download
  - http://jazz.net/downloads/rational-team-concert/latest
- Evaluate Rational Team Concert with a sandbox account!
  - https://jazz.net/sandbox/setup/web

Questions

DEMO

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