Hey! What’s wrong with Gerrit?!
A Little bit of history…

• < 2010
  • R4E is Ericsson in-house Review Tool (Clearcase/SVN)
  • Gerrit is a stand-alone web-based review tool (no Eclipse/Mylyn!)

• 2010: Mylyn Reviews & Mylyn Versions
  • Ericsson, Tasktop, INSO (Vienna University), also SAP, Red Hat
  • Mylyn Reviews: Common framework for eclipse-based reviews
  • Mylyn Versions: SCM tools using Eclipse team APIs

• 2010-2012: Development & First releases
  • Gerrit Connector for Eclipse/Mylyn!
  • Ericsson Contributes R4E: Redesigned to leverage Reviews and Versions

• 2012: Mylyn Reviews Common Components
  • Ericsson and Tasktop further integrate Reviews and R4E model/UI/Tasks

• 2013: Mylyn Reviews, R4E and Gerrit convergence
  • Ericsson and Tasktop building rich, model-driven, Gerrit-friendly tools
Look Guys, More Code!!!

Yummy!

I love juicy bugs...

The Promise of Gerrit

Reviews are Eating the World

Mylyn Project Gerrit Usage 2009-2013
The Trouble with Gerrit....

- No Workspace Integration
- Reviews == Commits
- Unstructured Comments
- No Visibility across Reviews
- Limited Traceability
- Single Workflow
- Overwhelming Notifications

Um... you weren't planning to submit that, were you?

What you really want here is a Publish-Subscribe pattern...

The copyright header formatting isn't consistent...
Editor Enhancements
Section Re-Ordering
Inline Global Comments
Decorators (Lei Zhu)
Spell Checking
Wiki Text
More Mylyn goodness!
Gerrit Mylyn Connector Demo

- Compare Editor Input
- Code Navigation, etc..
- Ported from R4E
Gerrit Mylyn Connector Demo

- Review Navigator
  - Review Artifacts and Comments outside of Editor!
  - CNF based
  - Filter and presentation controls
The Trouble with Gerrit....

- No Workspace Integration
- Reviews == Commits
- Unstructured Comments
- No Visibility across Reviews
- Limited Traceability
- Single Workflow
- Overwhelming Notifications

Why do I have to keep repeating myself?!

- No "TODOs"!!!
- Reviews == Commits
- Unstructured Comments
- No Visibility across Reviews
- Limited Traceability
- Single Workflow
- Overwhelming Notifications

FEED ME!!!!!

When you say "I'll deal with it later", did you mean "never"?

What about my comment on Patch Set 27?

Are you really expecting me to review 3k lines of code?!!

Say, when you have a few minutes, could you just take a look at my review?

...Sure, sure...I can wait a couple more weeks.

Why do I have to keep repeating myself?!

Uploaded Patch Set 1
Build Started...
Build Failed...
Uploaded Patch Set 2
Build Started...
Build Unstable...
Uploaded Patch Set 3
You need to Rebase first. Duh.

-2
-2
+1
+1
+1
-1
0
R4E to the Rescue!

R4E Provides a fully integrated Eclipse peer review environment...

Our Hero!!
• Reviews == Commits
  • Review by Commit or Free form
• Unstructured Comments
  • Stateful Anomalies
  • Anomaly Classes and Ranks
  • Design Rules (Anomaly Patterns)
• Lack of Visibility across Reviews
  • Reviews can be grouped by Project, Feature, Team...
  • Anomalies can be Postponed and Tracked across Changes and Reviews
• Limited Traceability
  • Reviews Items/Artifacts can be assigned to specific Users
  • Time Tracking and Due Date enforcement
  • BIRT Inspection Reports
R4E to the Rescue!

- No Workspace Integration
  - Full JDT/CDT/... integration
  - Code Navigability (across commits, reviews...)
  - Rich Inline Annotations
- Single Workflow
  - Multiple Review Types (Basic, Agile, Formal/IEEE 1028-2008)
- Overwhelming Notifications
  - Integrated Emails & LDAP support
What’s next?: A Vision for Mylyn Reviews

- Leverage, enhance and extend Gerrit.

- Support arbitrary review workflows and artifacts with rich Eclipse workspace integration.

- Provide enterprise review features that go beyond Gerrit and support, efficient, streamlined and collaborative peer reviews.

- Implement APIs and EMF model-driven tools to support developers for generic review, productivity and task tools.
Current Mylyn Reviews/R4E Architecture

- Workbench
- Task Data
- Task Manager
- Task
- R4E Editor
- Review
- Review Navigator
- Task List
- Gerrit
- R4E File Store
- R4E Review
- R4E Review Navigator
Now that’s more interesting......
Current & Future Work Effort (Mylyn Reviews)

- Mylyn Reviews 2.0.0 (Kepler)
  - Full EMF implementation
    - Richer Model
    - Edit Support
    - Persistence
    - Concurrency
  - Remotes API
    - Support Asynchronous / Low-Availability
    - Pull / Push Factories
    - UI Integration
  - Workspace-centric UI
    - Reviews Navigator, Eclipse Workspace features

- Mylyn Reviews 2.1.0 (Kepler SR1 ?)
  - Offline Reviews
    - Work without connection to remote!
    - Import review data and work locally

Sigh...Not even any pictures in this one.
Current & Future Work Effort (R4E)

- **Migrating R4E functionalities to Reviews** (Mylyn Reviews 2.0.0)
  - History resolution (partly integrated)
  - Enriched Annotations
  - UI Improvements (decorators, filters and sorters, etc.)

- **Gerrit Backend**
  - Improved persistence mechanism
  - Gerrit Server is central repository
  - Minimal overhead (small Gerrit plugin)
  - Review Gerrit Changes transparently with R4E

- **Model Reviews**
  - Review EMF and Papyrus models w/ EMF Compare
  - Logical models support
  - R4E only for now, Mylyn Reviews later.
  - Partial implementation, updating to EMF 2.1 (R4E)

(Screenshots...much safer than a demo.)
Choking on our own dog food

• Challenges
  • Refactoring across every component (UI, Model, Persistence, Mylyn API)
  • While the plane is in the air! (Kepler)

• I Can’t Digest this!
  • Mylyn is a patch set culture: $10^2$ lines
    • Typical Review: 2-3 days
  • Miles’ reviews? $10^3$ lines, $10^4$ lines..
    • Reviewers grumpy
    • Let’s break things up a bit
    • Endless rebasing ensues
    • Longest Review: 3 months

• Time for a new Recipe
  • Communication is key
  • Use the right process and toolset
  • and if one doesn’t exist...

• Create it!!!
More Information & Downloads

- Mylyn Reviews mailing list: mailto:mylyn-reviews-dev@eclipse.org
- R4E sub-subproject home page: http://www.eclipse.org/r4e/
- R4E Blog: http://r4eclipse.blogspot.ca/

COMMENTS, IDEAS AND CONTRIBUTIONS ARE ALWAYS WELCOME!!!

Miles Parker (Tasktop) @milesparker  miles.parker@tasktop.com
Sebastien Dubois (Ericsson) @dbass66  sebastien.dubois@ericsson.com
Q&A

Will there be a version for .NET?

Is this going to be on the test?

What does "under the supervision of the PMC" mean?
Give feedback on the sessions

1
Sign In: www.eclipsecon.org

Loved it!!!

2
Select Session Evaluate

+1? I give it a +10!

3
Vote

+1  0  -1

"Approved, submitted, and Merged!"