



# *Eclipse Mylyn*

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Evangelist, Eclipse Foundation

With material from Mik Kersten and Rob Elves

# *Task-Oriented Programming*

- **Tool**

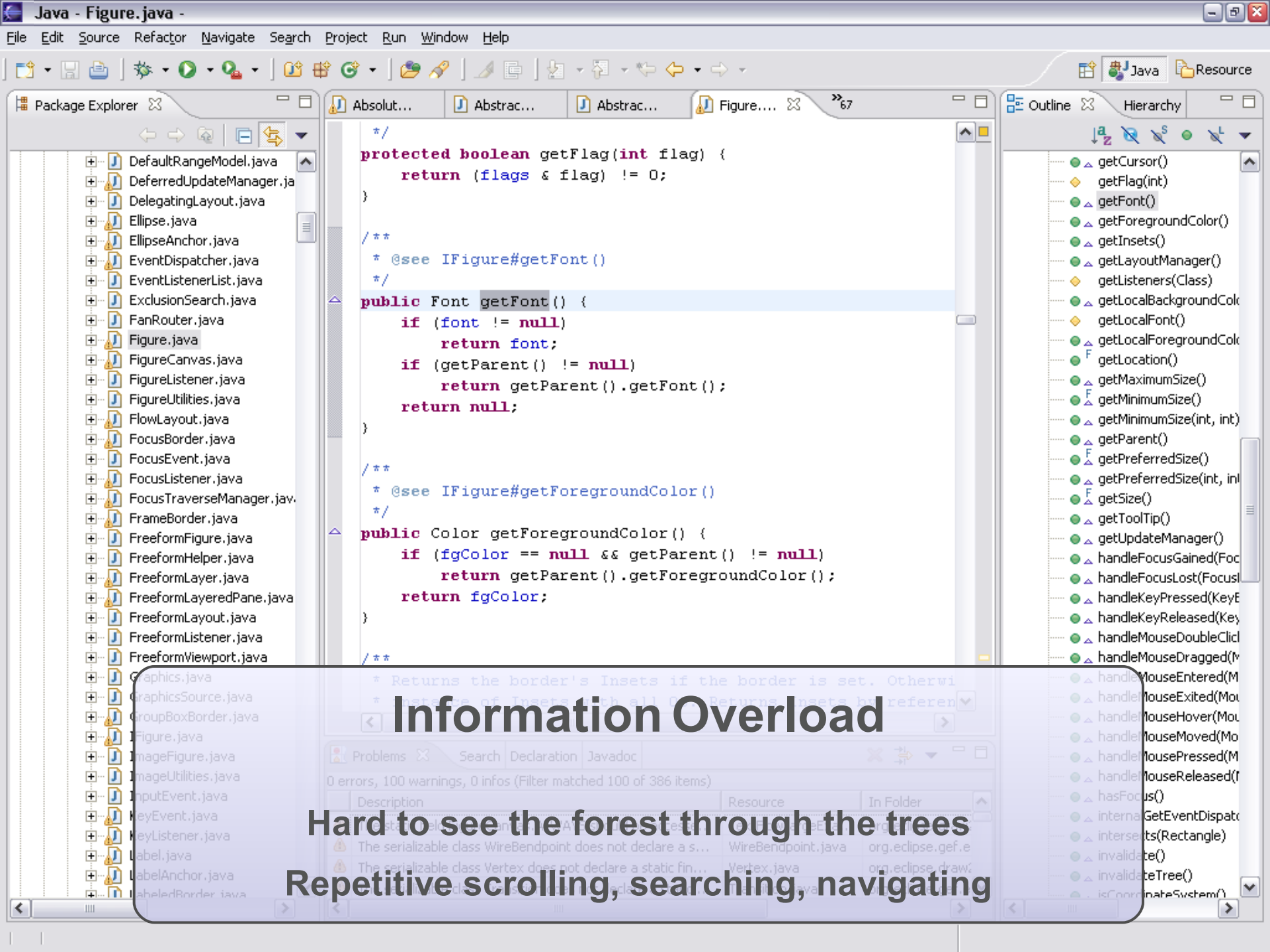
- Integrates task management
- Automates context management
- Reduces information overload
- Makes multi-tasking easy

- **Framework**

- Mylyn is an extensible framework

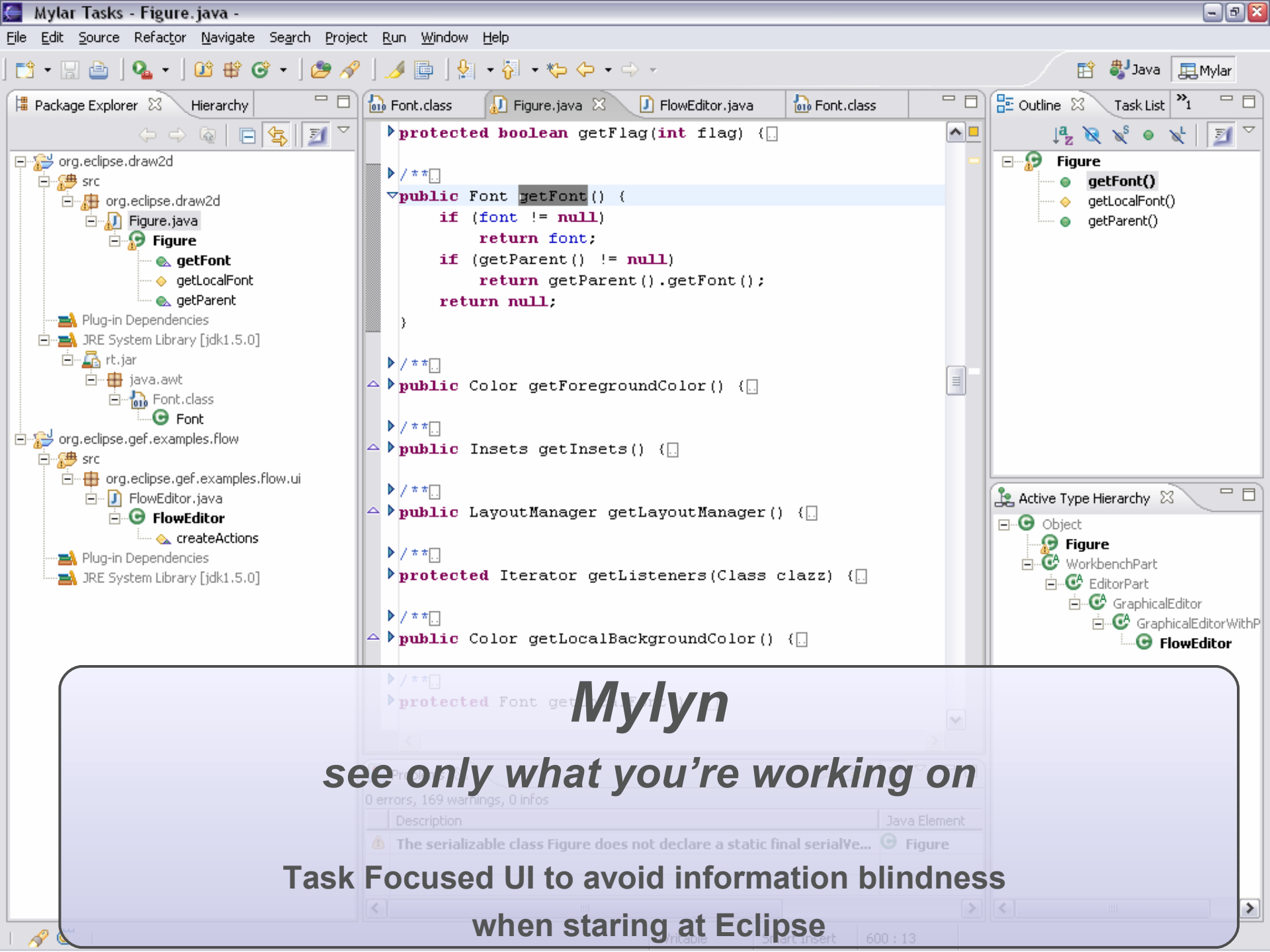
- **Integration**

- Showcase of open source and proprietary tools



# Information Overload

Hard to see the forest through the trees  
Repetitive scrolling, searching, navigating



**Mylyn**

*see only what you're working on*

**Task Focused UI to avoid information blindness**

**when staring at Eclipse**

# Task management

## ■ Before Mylyn

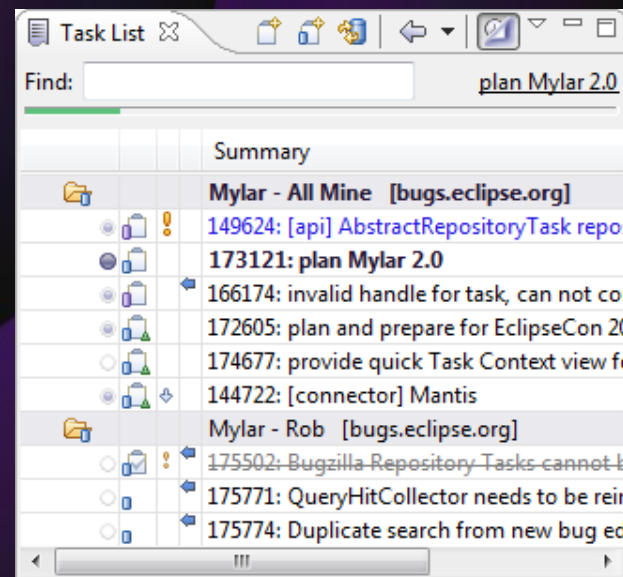
- Scattered throughout web apps, code and pieces of paper
- No integration with IDE workflow

## ■ One task list

- Manage all your tasks in a single personalized view
- Eclipse's rich searching, linking and editing facilities

## ■ Repository connectors

- Integrate web-based task repositories
- Offline editing and access
- Integrated change notifications





# Task-focused UI

## Information overload

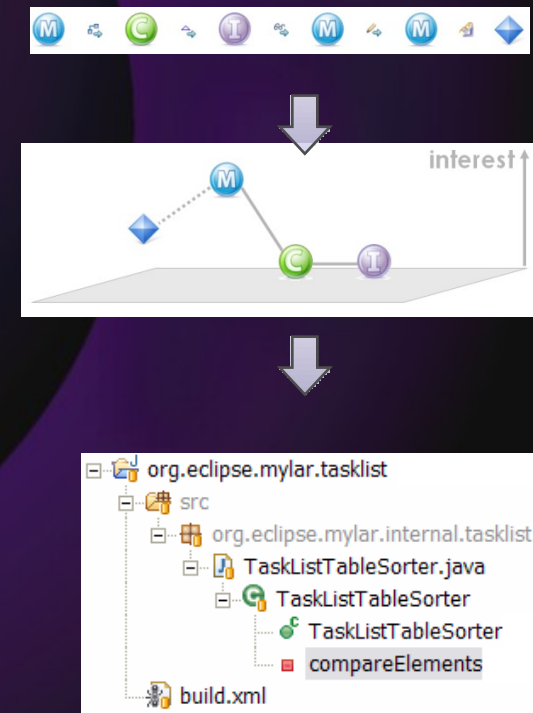
- Time wasted scrolling, browsing and searching, tagging, filtering
- Constant multi-tasking causes context loss

## Task context

- Mylyn monitors your interaction
- Creates degree-of-interest model
- What you touch is in your context
- Actively managed as you work

## Task-focused UI

- View filtering, element decoration
- Automatic folding, content assist ranking
- Editor and perspective management
- One-click task switching

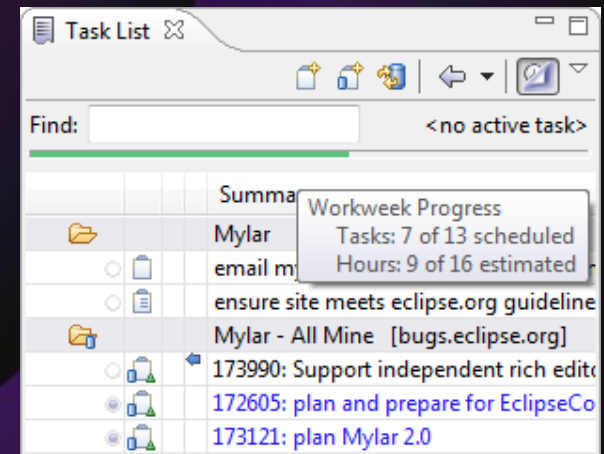


# Collaboration

- Before Mylyn
  - Manual management of change sets
  - Email overload, interruption, difficulty sharing expertise
- Change set management
  - Changes are automatically grouped by task
  - Commit messages are automatic
  - Everything is linked
- Task context sharing
  - Expertise is captured and can be shared via repository
  - Tasks are easy to recall, knowledge easy to share

# Planning

- With Mylyn
  - Too many tasks end up in your Task List
- Personal planning
  - Meshes with team planning activities
  - Can monitor components and collaborations
- Focused workweek
  - See only the tasks you need to work on





# *Europa*

- Mylyn 2.0 included with Europa Release Train
  - Deep integration: debugging, XML folding
  - More automation: workflow, content assist, streamlining
  - Flexible task organization, planning tool integration
- Included with EPP packages
  - Eclipse IDE for Java Developers
  - Eclipse IDE for JEE Developers
  - Eclipse IDE for RCP/Plug-in Developers
- Not included in Eclipse IDE for C/C++ Developers
  - Not sure why
  - There have been complaints...



# *Mylyn Framework*

# *Mylyn APIs*

- Tasks: task management
- Context: context management
- Team: team provider integration
- Monitor: workbench interaction monitoring

# Tasks API

- Goal
  - Bring your repositories' tasks into Eclipse
  - Streamline task management user experience across repositories
  - Provide customizable behavior with consistent integration
- Task repository connectors
  - Core facilities: lifecycle, persistence, synchronization
  - UI facilities: queries and task editing
  - Decide on level of integration: queries only, rich editing
  - Reference implementation is Bugzilla

# Context API

- Goal
  - Connect task context model to domain-specific artifacts
- Task context bridges
  - Structure bridges: map context to existing models: e.g. JavaModel
  - UI bridges: selection/edit/refactoring capture, map to UI
  - Reference implementation is Java
  - DLTK generates integration with Mylyn



# *Team & Monitor APIs*

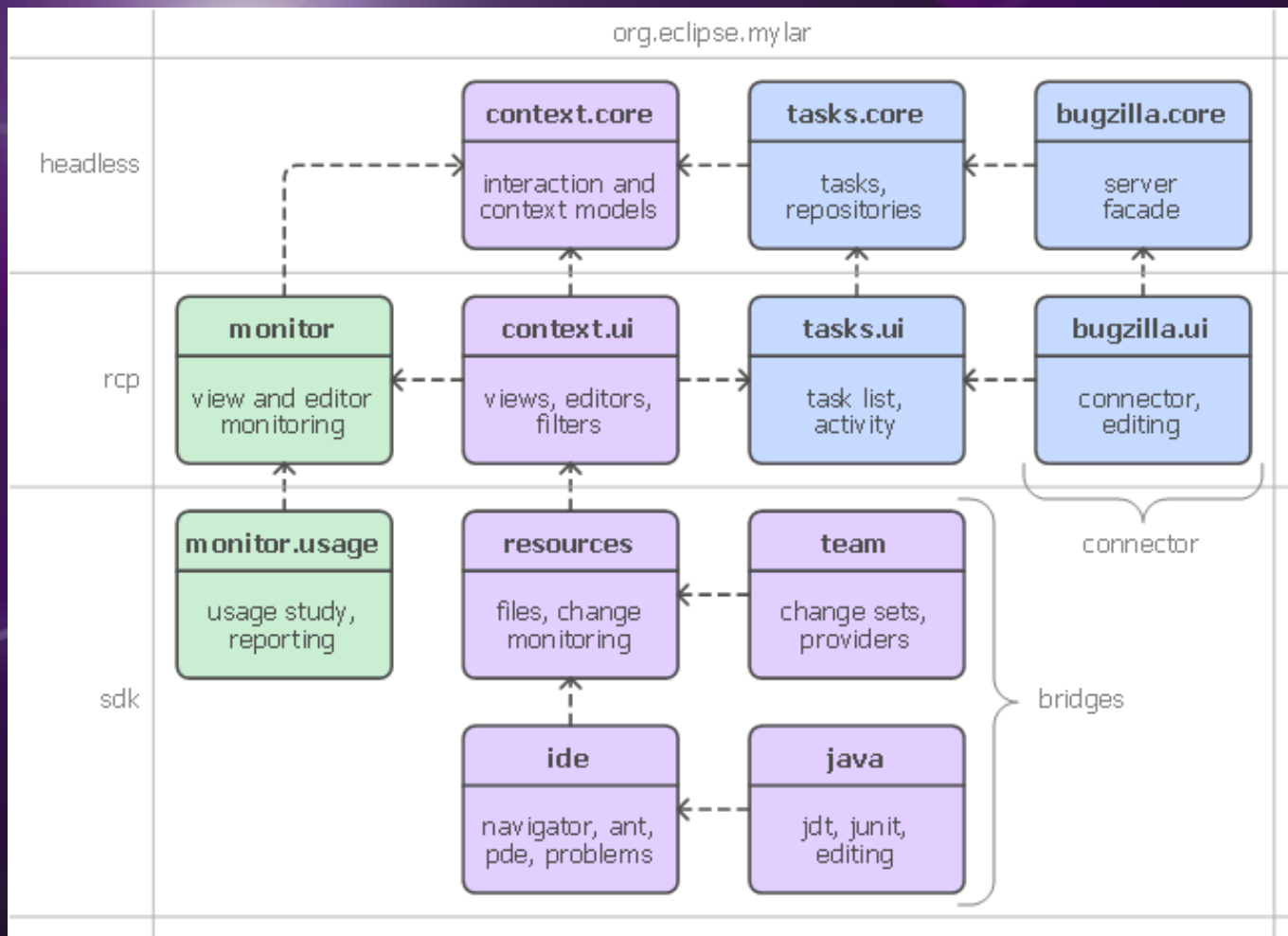
- **Team API**

- Provides change set integration, automatic commit messages
- Reference implementation is CVS

- **Monitor API**

- Captures user's workbench interaction history
- Monitors views, editors, commands, preferences
- Provides privacy, obfuscation, reporting
- Reference implementation is user study example

# Framework



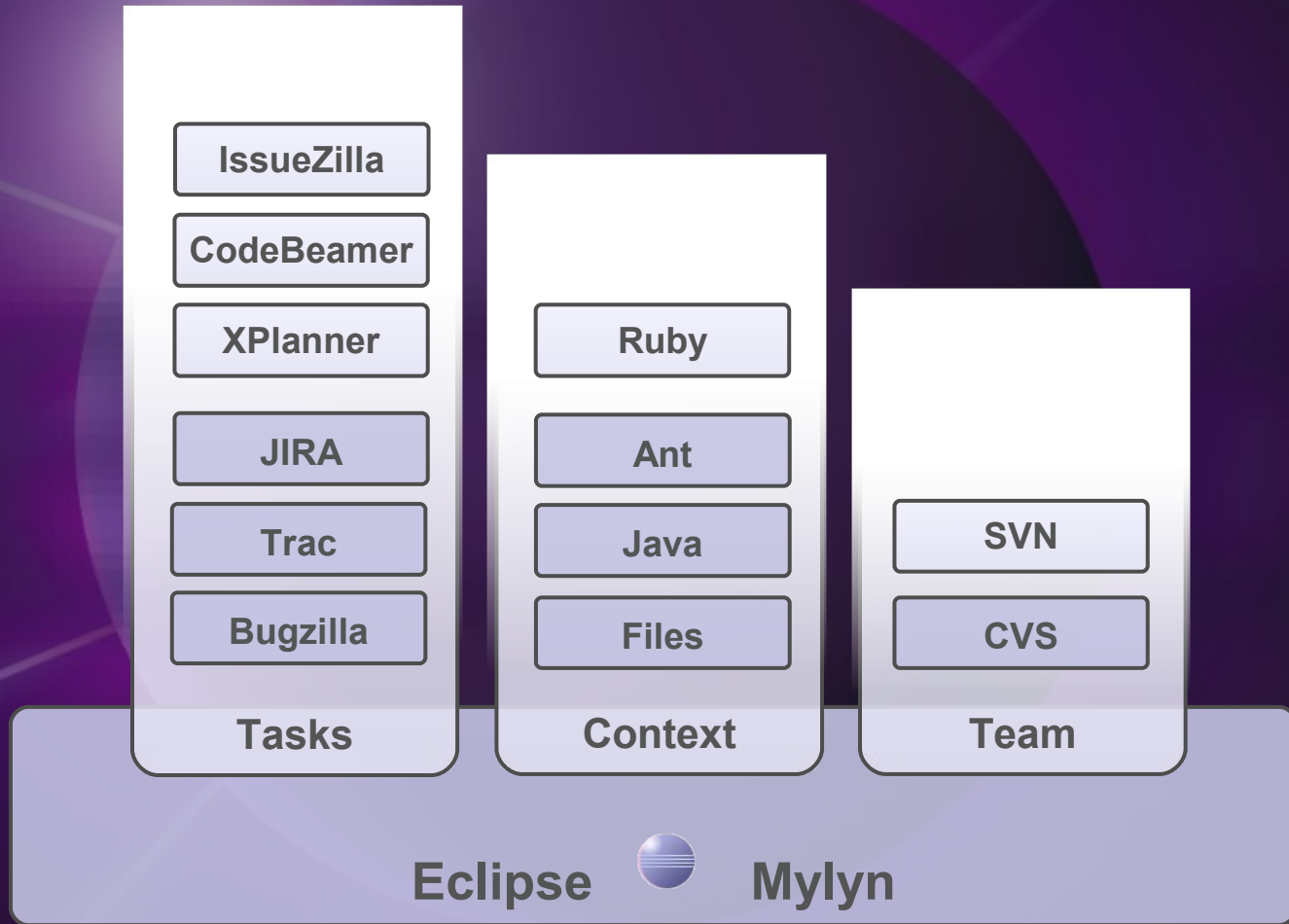
# *Platform for task-focused interaction*

- Mylyn project
  - Making tasks the central point for interaction with the IDE
  - Continuing to improve the integration of task context with workflow
- Research projects
  - Eclipse usability monitoring, interaction playback (UBC)
  - Visualization and tagging (UVic)
- Third parties
  - Open source and extensions
  - Vendor extensions and bundling



# *Integration Showcase*

# Status





CodeBeamer  
by Lubos Pochman

Mantis  
by Chris Hane

XPlanner  
by CodeGear

Change Request 4357: Add version support for CodeBeamer connector? X

**Summary:** Add version support for CodeBeamer connector?

**Status:** New **Priority:** Normal **ID:** 4357 **Opened:**  **Modified:** 2007-01-14 14:47:00

**Attributes**

Tracker: Change Request Start Date:

Category: Server  
Severity: Major

**Attachments (0)**

**Description**

CodeBeamerRepos

**Comments (0)**

**New Comment**

Project: backoffice Resolution: open  
Status: new  
Severity: feature  
ETA: none  
Category: Bug  
Reproducibility:

**Steps To Reproduce**

**Additional Comments**

**Description**

**Personal Planning**

Scheduled for: Mar 1, 2007 6:00 PM

**Actions**

Search for Duplicates Create New

CodeBeamer

Mantis

Java - TeamInsight - JBuilder

File Edit Navigate Search Project Clearcase Run VSS Window Help

Package Explorer Navigator

- com.borland.dsb.bugzilla
- com.borland.dsb.BugzillaStatusPortlet
- com.borland.dsb.BurndownChartPortlet
- com.borland.dsb.client
- com.borland.dsb.ConfigurationPortlet
- com.borland.dsb.continuum
- com.borland.dsb.ContinuumBuildStatusPortlet
- com.borland.dsb.IterationStatusPortlet
- com.borland.dsb.jdk
- com.borland.dsb.liferay
- com.borland.dsb.liferay.jsp.portlet
- com.borland.dsb.mail
- com.borland.dsb.maven
- com.borland.dsb.model
- com.borland.dsb.mysql

Outline

An outline is not available.

**New XPlanner Query**

New XPlanner Query

Query name: all tasks

All my current tasks  
 Selected tasks

Projects, Iterations, and User Stories:

- SampleProject
  - Iteration 2
  - Story 4
  - Iteration 1
  - story 1
  - story 2

Grouping:  
 Tasks  
 User Stories

Scope:  
 All  
 My

< Back Next > Finish Cancel

Task List

Find:  <no active task>

Description
my xplanner tasks [10.143...
27: task 3
my bugs [10.143.18.173]
1: bug 1

JavaScript, TCL, Ruby  
by eclipse.org/dltk

```
class TestFileUtils < Test::Unit::TestCase
  TMPROOT = "#{Dir.tmpdir}/fileutils.rb.#{$$}"
end

prevdir = Dir.pwd
tmproot = TestFileUtils::TMPROOT
Dir.mkdir tmproot unless File.directory?(tmproot)
Dir.chdir tmproot

def have_drive_letter?
  /djgpp|mswin(?:ce)|mingw|bcc|emx/ =~ RUBY_PLATFORM
end

def have_file_perm?
  /djgpp|mswin|mingw|bcc|wince|emx/ !~ RUBY_PLATFORM
end

$fileutils_rb_have_symlink = nil

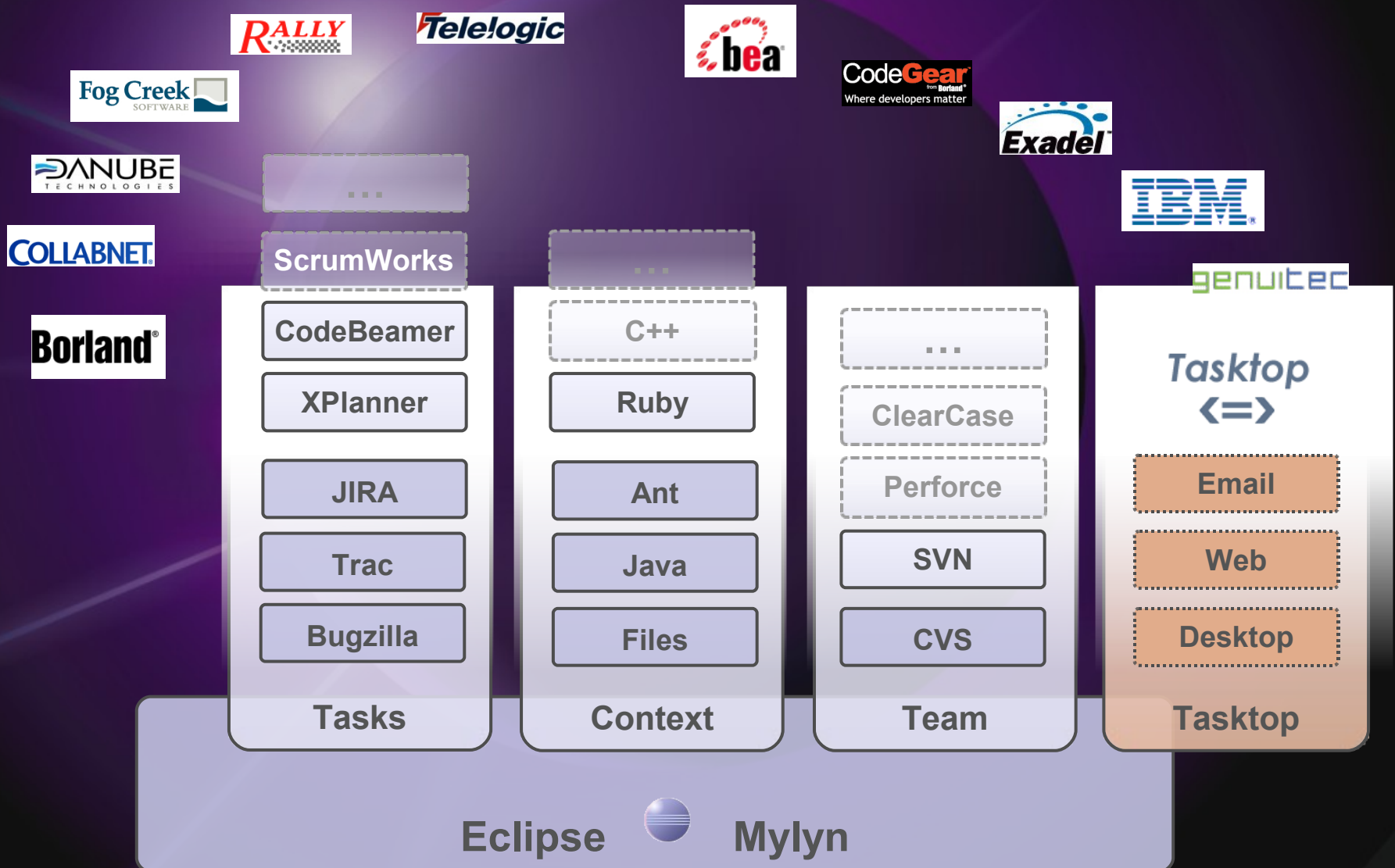
def have_symlink?
  if $fileutils_rb_have_symlink == nil
    $fileutils_rb_have_symlink = check_have_symlink?
  end
end

$fileutils_rb_have_symlink
```

SVN  
by Polarion

SVN  
by Subclipse

# Community needs



# Tasktop

- Email & windows
  - Create task from email
  - Integration with desktop
- Calendar
  - Next event, planning
  - Google Calendar
- Browsing
  - Click task in Thunderbird, opens via Mylyn
  - Click bug in browser, opens via Mylyn
- Eclipse becomes the desktop

# *Changing how we work*

- Once tasks are explicit
  - Dramatic reduction in information overload
  - Information you need to get work done is at your finger tips
  - Multitasking and recalling old tasks become effortless
  - UI automation (e.g. working sets, search, commit messages)
  - Keeps you in Eclipse and out of your browser and inbox
- Validated technology
  - Statistically significant increase in programmer productivity
  - Task context model supports generic knowledge work
- The framework is open and growing
  - Mylyn is all about integration



# Summary

## ■ Summary

- Mylyn has already shown that working in a Task Focused way can help programmers
- Because Mylyn is part of Eclipse and has APIs, RCP, there is the opportunity to reuse Mylyn for other domains
- We're working towards that goal, and if others work towards that goal, Mylyn will have support

## ■ The framework is open and growing

- All integration built on Mylyn APIs will work on Tasktop
- OSS developers can implement similar integration for Linux