



IBM Software Group

# Eclipse and IBM Rational's Eclipse-based tooling

Giles Davies

**Rational.** software



@.business on demand software



# What is Eclipse?



## What is Eclipse | Definition

“Eclipse is an open source community whose projects are focused on providing a vendor-neutral open development platform and application frameworks for building software.”

About Us from <http://www.eclipse.org>



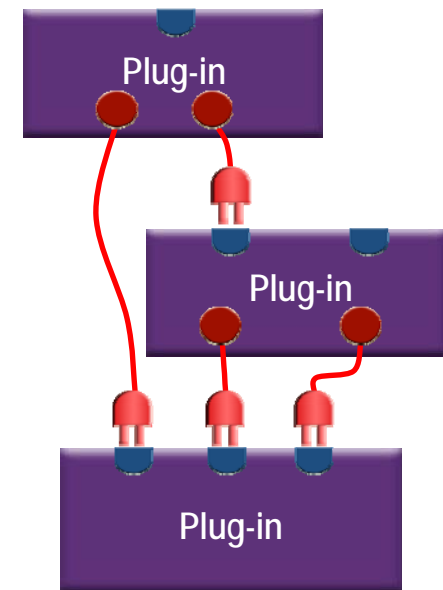
# What is Eclipse | Who's it for?

- A development platform for:
  - ▶ Enterprise development (modelling, testing, reporting, data, web....)
  - ▶ Embedded development (C/C++, J2ME, Mobile Linux....)
  - ▶ Rich Client Application development
  - ▶ IDE (Java, C/C++, Fortran, COBOL, PHP....)
- Designed for extensibility
  - ▶ Huge ecosystem (**Eclipse Plugin In Central**)
  - ▶ 652 plugins



# What is Eclipse | What can you do with it?

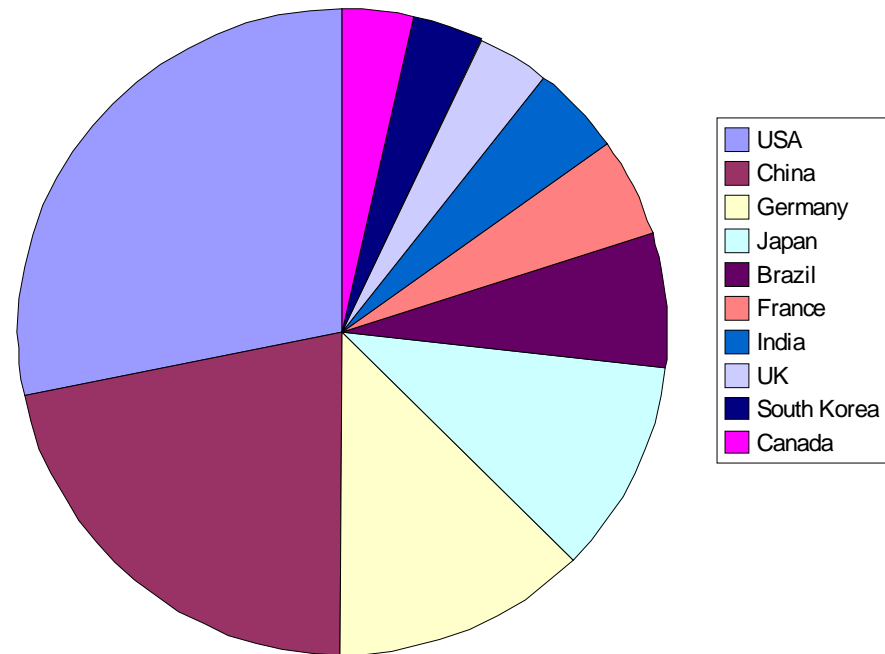
- Extensibility through OSGi implementation
  - ▶ Plug-ins make Eclipse whatever you need it to be
- Focus on developing a universal platform of frameworks and exemplary tools
- Tools extend the Eclipse platform using plug-ins
  - ▶ Business Intelligence and Reporting Tools (BIRT)
  - ▶ Eclipse Communications Framework (ECF)
  - ▶ Web Tools Project (WTP)
  - ▶ Eclipse Modelling Framework (EMF)
  - ▶ Graphical Editing Framework (GEF)
  - ▶ Test and Performance Tooling Project (TPTP)



# What is Eclipse | Downloads

- This year:
  - ▶ 650,000 downloads per month
  - ▶ 21,000 per day
- Global distribution
  - ▶ USA & China lead
  - ▶ Per capita, Switzerland leads
    - 2 per 1000 population!
  - ▶ Vatican City “early adopter”
- Platform mix
  - ▶ 86% Windows
  - ▶ 11% Linux
  - ▶ 3% MacOS
  - ▶ <1% other platforms

Eclipse 3.2 Downloads



## What is Eclipse | Ownership

- Eclipse is free (as in speech) – i.e. open source
- Eclipse is free (as in beer)
- “Owned” and managed by Eclipse.org
- Broad consortium of companies
- Membership open
  - ▶ Agree to release products based on Eclipse
  - ▶ Agree to contribute to the Eclipse platform
  - ▶ Approved by the board of Eclipse.org

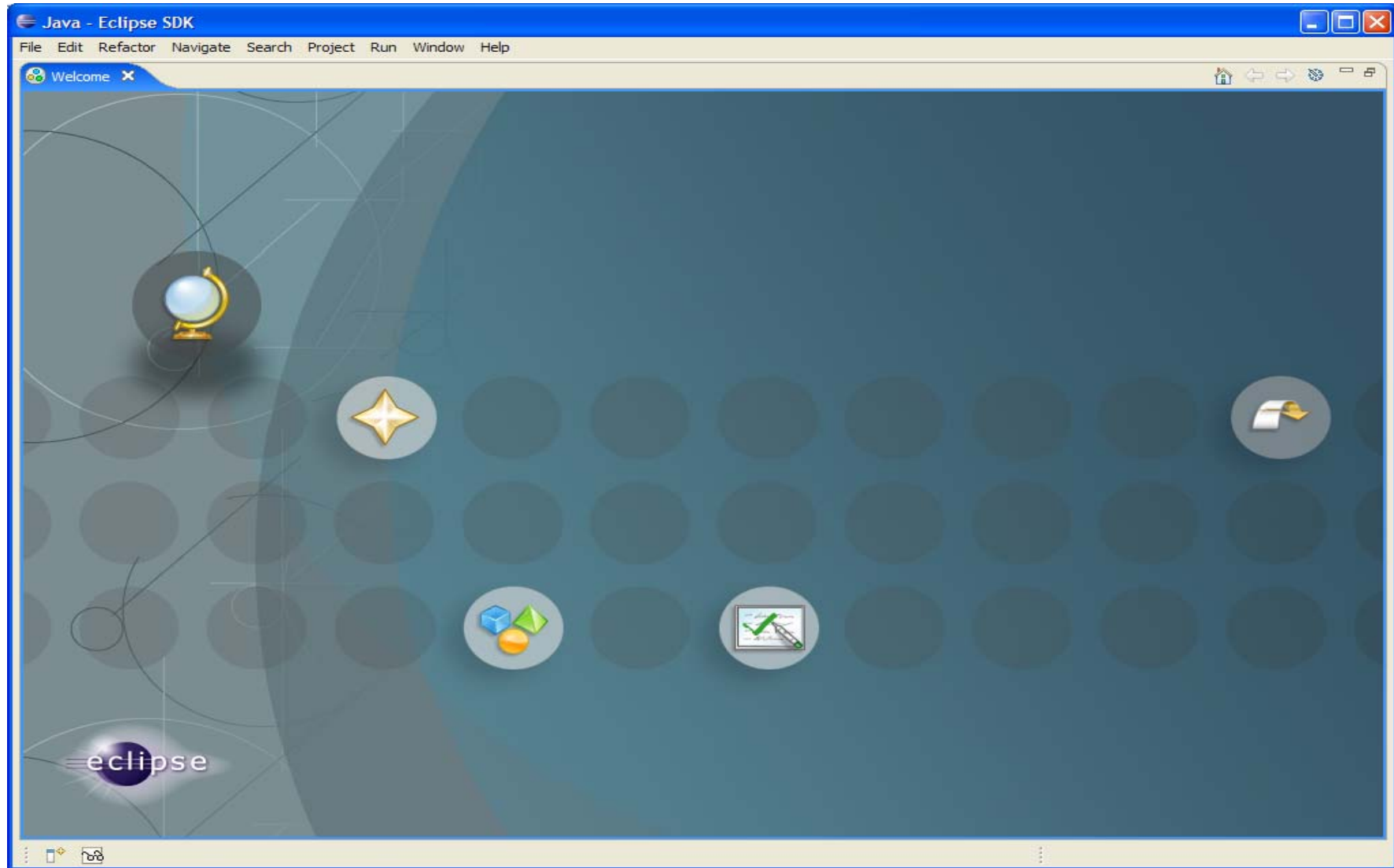


# What is Eclipse | Board membership

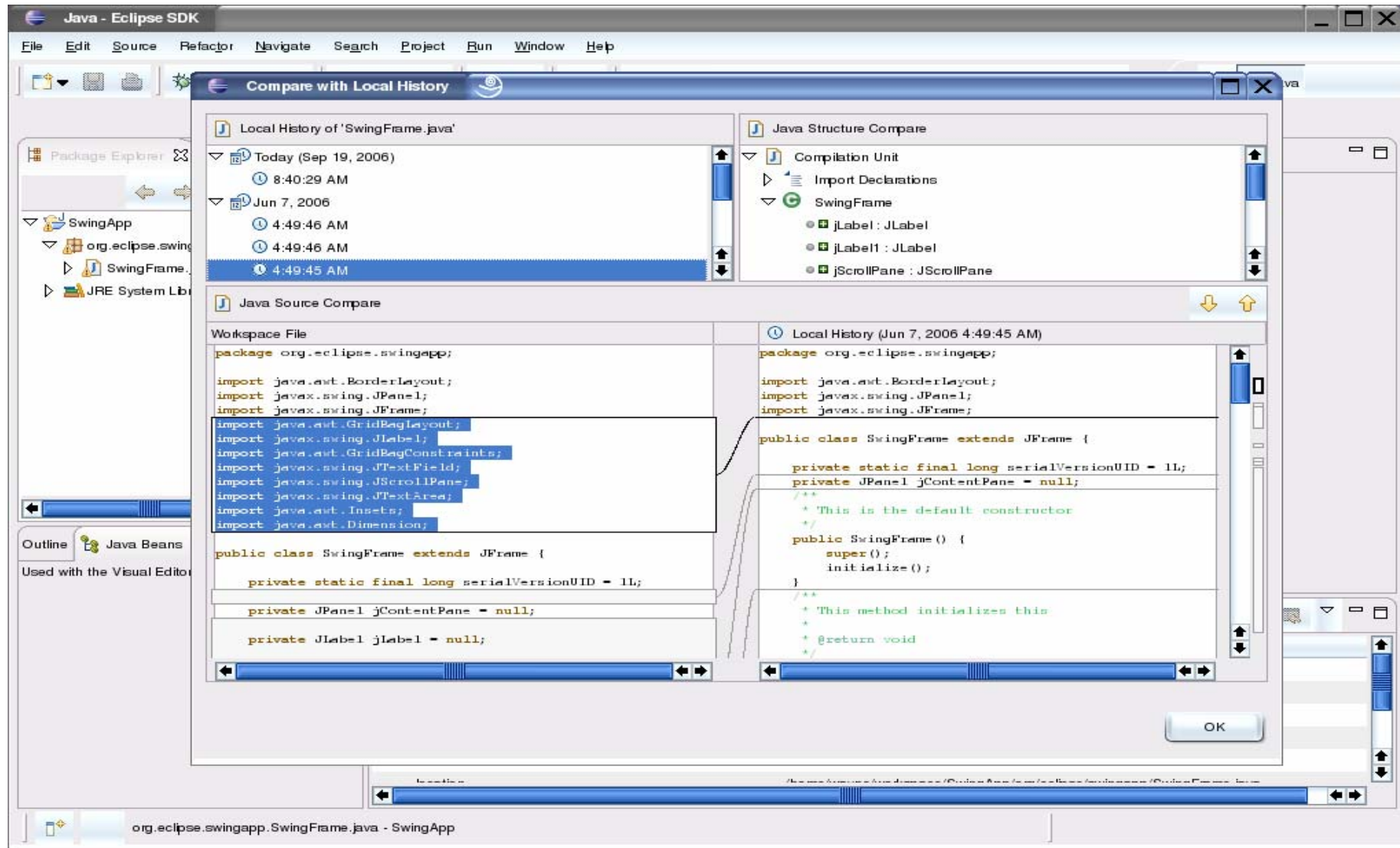




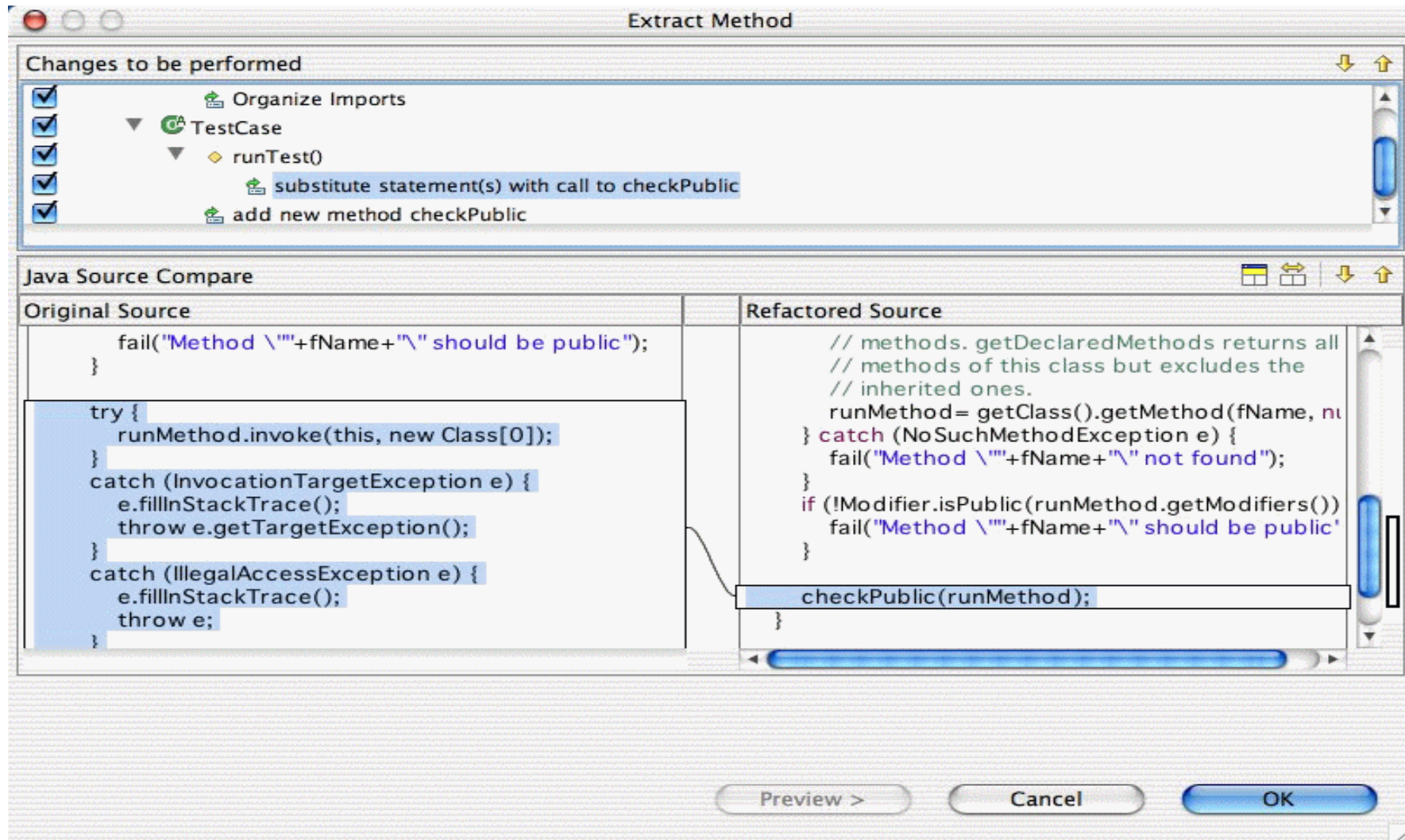
# What is Eclipse | Look and Feel | Windows



# What is Eclipse | Look and Feel | Linux



# What is Eclipse | Look and Feel | Mac





# What is Eclipse | Look and Feel | Rich Client Platform

The screenshot displays the IBM Workplace Managed Client interface. The main window is titled "Giles Davies - Inbox - IBM Workplace Managed Client" and contains several panes:

- Notes Applications:** A sidebar on the left with icons for Mail, Calendar, Address Book, To Do, Replication, Favorite Bookmarks, Databases, and More Bookmarks.
- Welcome Giles Davies - Inbox:** A central pane showing a mail client interface with folders like Inbox, Drafts, Sent, Trash, and Views. A list of emails is displayed, including one from "BZ Media" with the subject "EclipseSource: My EclipseCon".
- IBM Lotus Sametime Connect:** A floating window on the right showing a contact list under "Available" and "Basingstoke".
- Sametime News:** A small window at the bottom right displaying "Lotus Sametime 7.5 (Gold+1)" and the IBM logo.

At the bottom of the screenshot, there is a status bar that reads "Read 160 bytes of data" and "Offline".





# IBM & Eclipse

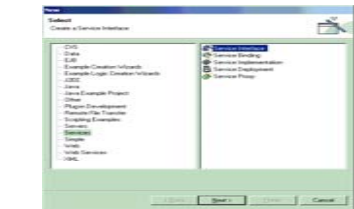
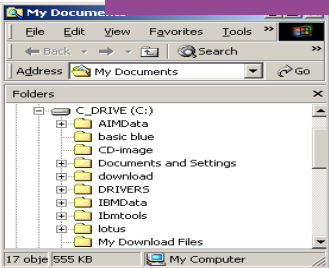
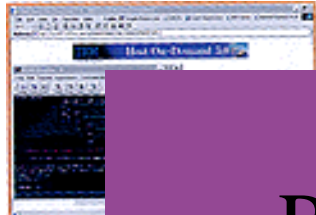
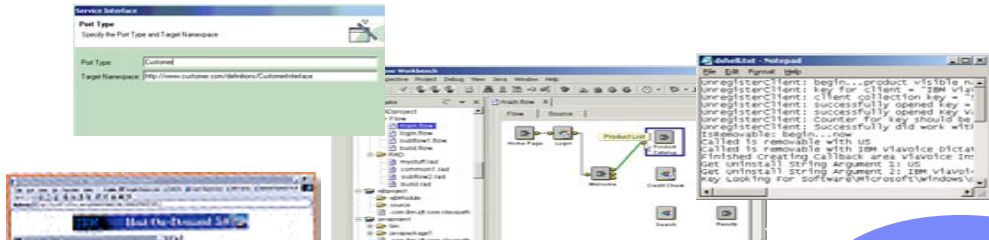


## IBM & Eclipse

- November 2001, IBM donated approximately \$40 million in code and tools to the Eclipse open-source project.
- IBM continues to serve as one voice on the 41 member Eclipse Board of Stewards and provides development resources, logistical support and software donations to further the advancement of Eclipse
- IBM Eclipse Research Projects
  - ▶ <http://www.research.ibm.com/eclipse/>
  - ▶ Projects in many areas; requirements, design, implementation, collaboration, testing, maintenance



# IBM & Eclipse | Why build on Eclipse?



Performance Tuner

Site Developer

Adapter Builder

XML Schema

Portal Development

Bus. Logic Developer

Legacy Mgt.

Proliferation of poorly integrated tools

- Programmers
- Performance analysts
- Web Content developers
- Administrators
- App developers
- Configuration managers
- Graphics artists
- Business Rule Analysts



## IBM & Eclipse | Why build on Eclipse?

- Open, extensible architecture based on plug-ins
- Multi-platform, multi-language, multi-vendor
- Out-of-box functionality and quality to attract developers
- Endorsed by major tool vendors
- Reduce desktop clutter with a single platform
- Improve learning curve with a single approach
- Improve data integration and flow between tools





# Eclipse 3.x

# Perspectives

The screenshot displays the Eclipse IDE interface for modeling. The main editor shows a UML class diagram with two classes: **Employee** and **Department**. The **Employee** class has a method `newOP()`. An association line connects the two classes. The **Model Explorer** on the left shows a project structure with folders like **Blah**, **Test**, and **Blank Model.emx**. The **Palette** on the right contains various UML diagram elements. The **Properties** window at the bottom shows the configuration for the selected association: `<Association> (department:Department)(employee:Employee)`. The association roles are `employee` and `department`, both with a multiplicity of `1`. The `Is navigable` checkbox is checked for both roles.



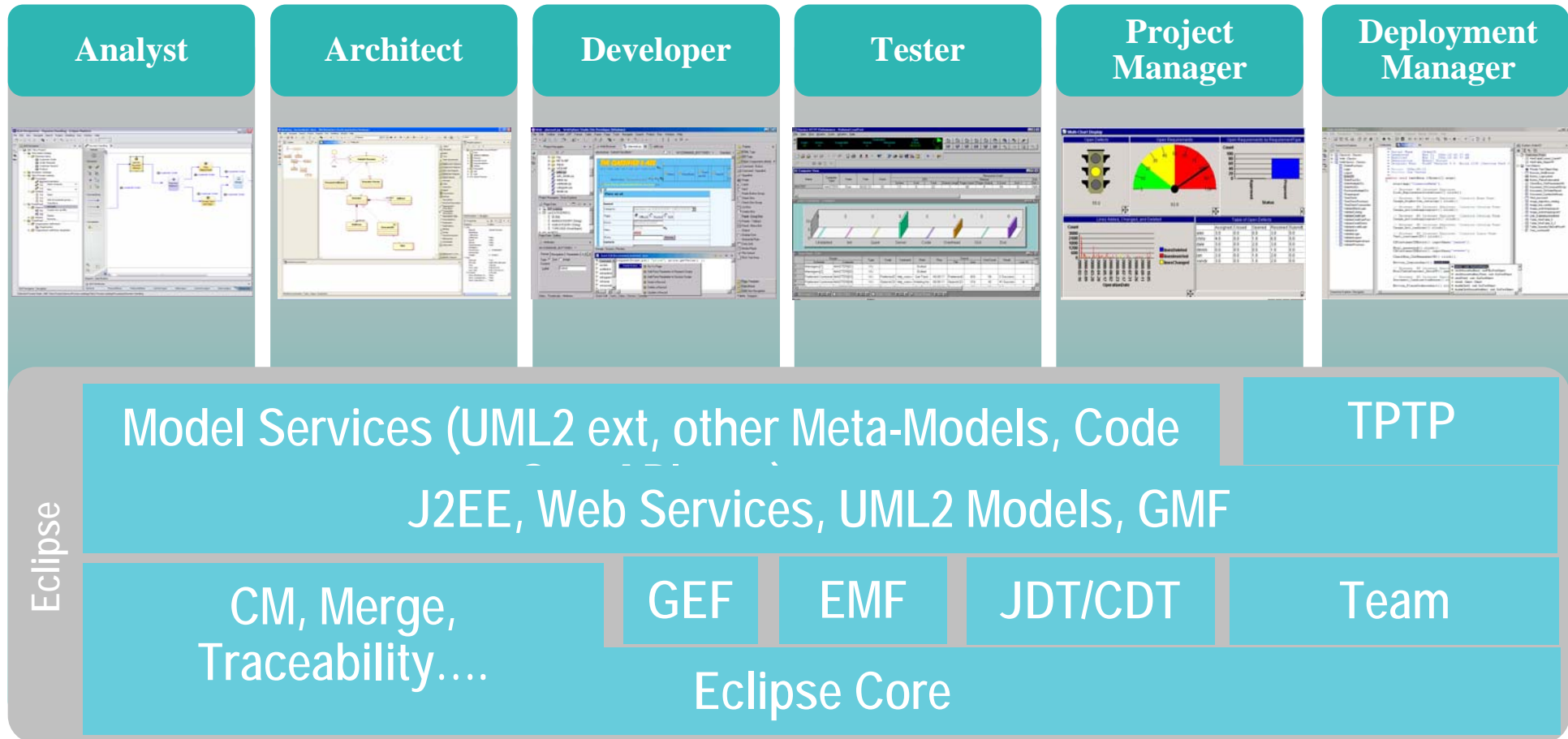


# IBM Rational



# IBM Rational | Software Development Platform

*Raising the level of abstraction, transforming development*



# IBM Rational | Eclipse Challenges

- Some 2.3 million developers worldwide use Eclipse as a development environment independent of commercial tools
- Development Organizations are reluctant to build mission critical applications with tools that have inadequate support & accountability
  - ▶ Growing movement towards compliance exacerbates the situation
- A “community support” model exists, but is challenging to leverage.
  - ▶ More suitable for experienced developers
  - ▶ Inhibits growth in developer ramp-up
  - ▶ Mentoring approach taxes development leads

“How do I support new developers without reducing productivity?”

“Eclipse gives us all we need, but I’m worried about compliance issues”



# IBM Rational | Enterprise support for open source

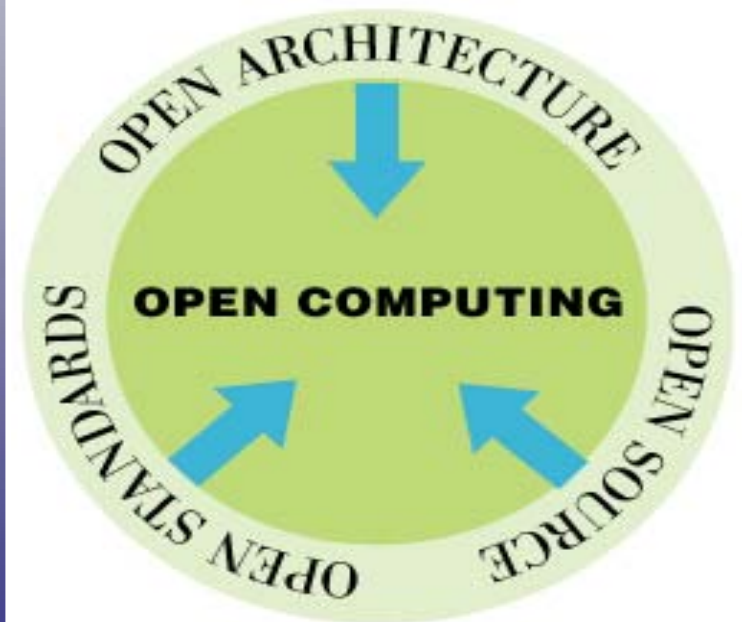
## *IBM Rational Elite Support for Eclipse*

### Benefits:

- Broader commercial vendor support for latest release of Eclipse
- Flexibility to rely on the open source community for supporting expert users on the base Eclipse platform, or purchase commercial support for new and emerging skill level staff.
- Reduces in-house support costs

### Key Features

- Supports customer's own qualified Eclipse environment
- Support-only offering (i.e., not an Eclipse or tools distribution)
- Availability in Q4 2006
- Phone support at no additional cost
- Defect Fixes
- Equivalent to IBM commercial product support



*IBM Rational Elite Support for Eclipse*



# IBM Rational | Elite Support for Eclipse

## *Supported Eclipse Projects*

- The support offering will include support for the Eclipse Platform, including the Java Development Toolkit (JDT) and its Plug-in Development Environment (PDE).
- Rational will also support the following projects and frameworks associated with the Eclipse Platform:
  - ▶ Web Tools Platform (WTP)
  - ▶ Test and Performance Tools Platform (TPTP)
  - ▶ Graphical Editing Framework (GEF)
  - ▶ Eclipse Modeling Framework (EMF)





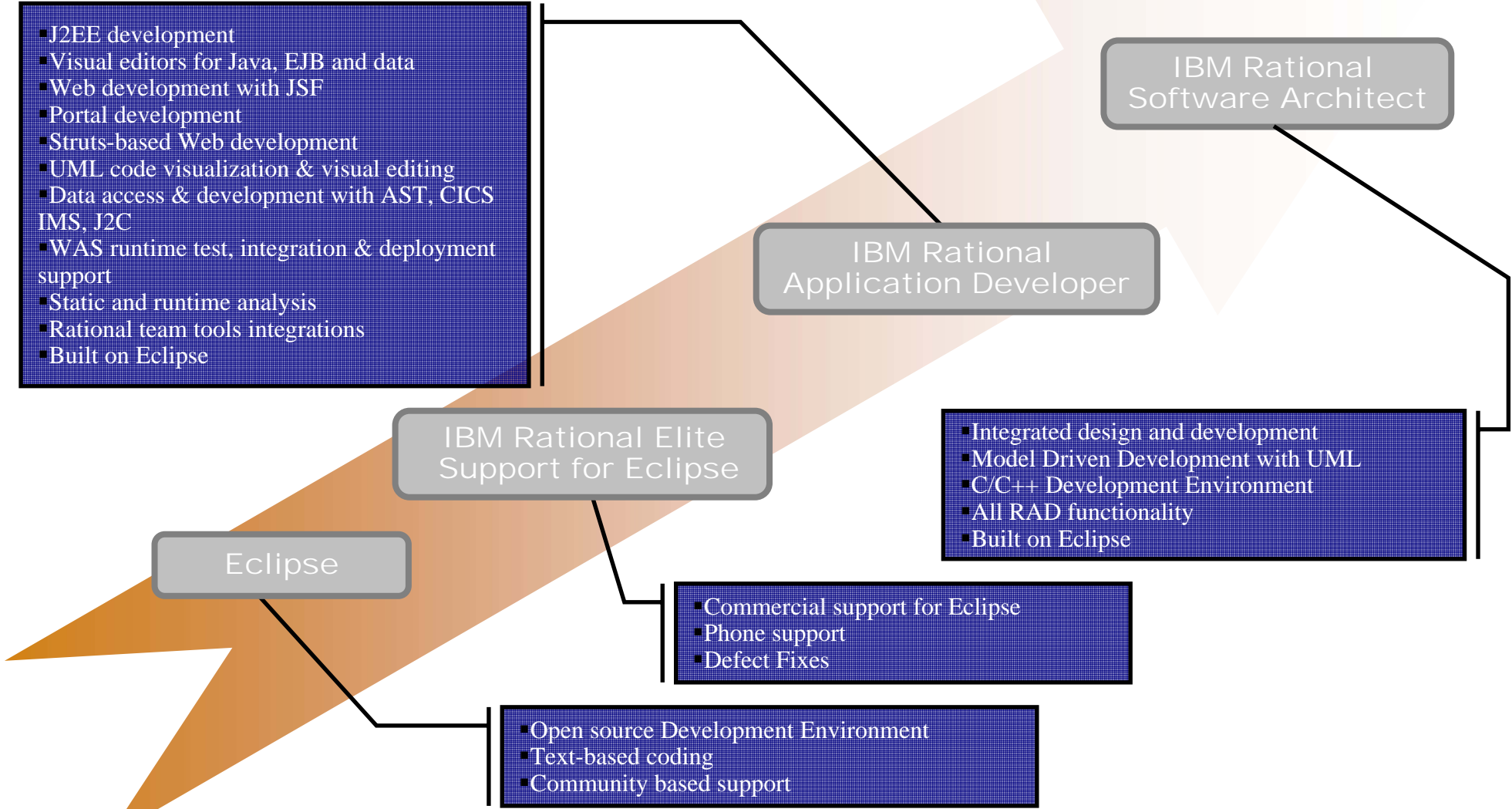
# IBM Rational | What Does Elite support provide?

Support-Only Offerings	IBM Elite Support
Electronic Problem Submission	Yes
Voice Problem Submission	Yes
Number of technical support incidents	Unlimited
Basic configuration assistance	Yes
General usage questions	Yes
Compatibility and interoperability questions	Yes
Language in which support is provided	English
Support Hours	8am-5pm M-F (customer time zone) (24x7x365 for severity 1 problems)
Response target	2 business hours
Availability	Worldwide
Defect Submissions Tracked Online	Yes
Defect Patch Fixes Available Online	Yes
Critical Defect Workaround Development	Yes
Defect Fixes Submitted to Applicable Community Projects	Yes



# IBM Rational | Design and Construction Tools

## Adding value to Eclipse





# IBM Rational | Commitment to Eclipse

- Software Requirements
  - ▶ Rational RequisitePro
- Integrated Development Environments
  - ▶ Rational Software Architect
  - ▶ Rational Software Modeler
  - ▶ Rational Application Developer
  - ▶ Rational Web Developer
  - ▶ Rational Systems Developer
  - ▶ Rational Data Architect
- Test Environments
  - ▶ Rational Manual Tester
  - ▶ Rational Functional Tester
  - ▶ Rational Performance Tester
- Software Change Management
  - ▶ Rational ClearQuest
  - ▶ Rational ClearCase
- Process
  - ▶ Rational Method Composer
- Reporting
  - ▶ Rational SoDA

Blue = 100% Eclipse based, Grey = Integration into Eclipse





# Futures



## Futures | IBM Rational Public Beta

- We want your feedback on our next generation of Eclipse based tools
- Beta code to be available soon (by the end of October)
- Pre-register now to get access to the beta products
- <http://www-306.ibm.com/software/rational/beta/v7/>
- Three beta products:
  - ▶ IBM Rational Software Architect 7.0
  - ▶ IBM Rational Functional Tester 7.0
  - ▶ IBM Rational Performance Tester 7.0



# Futures | IBM Rational Software Architect 7.0

- An advanced model-driven development and static analysis tool for software architects and model-driven developers creating Service Oriented Architecture (SOA), J2EE and portal applications.
- v7.0 open beta features:
  - ▶ Easier installation experience
    - Easy configuration of team's environment
    - Reduced installation footprint
- Improved Web Diagram editor
  - Draw Web pages, links and automated flow-logic
  - Drag and drop for relational data and Web services into Web pages
  - ▶ Improved C++ support
    - CDT 3.1.1
    - Create C++ domain models with improved modeling support
    - Improved transformation support
  - ▶ Expanded unit testing, with WebSphere® Application Server V6.1
  - ▶ Improved Web Security tools
  - ▶ New team modeling capabilities



## Futures | IBM Rational Functional Tester

- IBM Rational Functional Tester is an advanced, automated functional and regression testing tool.
- v7.0 open beta features:
  - ▶ Extended environment support:
    - ▶ SAP: Support for SAP GUI
    - ▶ Siebel 7.8: Now supports both Siebel 7.7 and 7.8
    - ▶ FireFox: Now supported
    - ▶ Citrix: Certified as a workbench host for Citrix server
  - ▶ .NET 2.0



# Futures | IBM Rational Performance Tester

- IBM Rational Performance Test is a performance test creation, execution and analysis tool.
- v7.0 Open Beta features:
  - ▶ Resource monitoring - Monitoring system resources using Windows PerfMon, Linux/UNIX Rstatd, or Tivoli monitoring products
  - ▶ Response time breakdown - Application monitoring and problem analysis to isolate problems in the server environment
  - ▶ Root-Cause Analysis (Overlay Response Times)
  - ▶ IP Aliasing - Support for emulating virtual user loads that use a range of IP Addresses to more accurately emulate real world scenarios
  - ▶ Standard deviation - Additional counters to better evaluate the performance metrics reported in the tool
  - ▶ Agent-less Monitoring



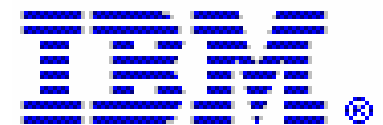
# Resources

- Eclipse
  - ▶ <http://www.eclipse.org>
- Eclipse Plug-ins
  - ▶ <http://www.eclipseplugincentral.com/>
- Rational Open Beta for v7.0
  - ▶ <http://www-306.ibm.com/software/rational/beta/v7/>



# Summary

- Eclipse is a mainstream development environment
- But, there are challenges associated with commercial use of open-source software:
  - ▶ Compliance issues
  - ▶ Limited community support
- IBM Rational Elite Support for Eclipse addresses the issues
  - ▶ Commercial level support, including phone support
  - ▶ Defect Fixes
- IBM Rational provides a continuum of value based on Eclipse
  - ▶ Eclipse Support adds value to Eclipse
  - ▶ IBM Rational Application Developer adds value to Eclipse
  - ▶ IBM Rational Software Architect adds additional value.







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