



# Eclipse RAP 1.0 Release Review

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please use this bug for comments / votes:  
[https://bugs.eclipse.org/bugs/show\\_bug.cgi?id=204737](https://bugs.eclipse.org/bugs/show_bug.cgi?id=204737)



# eclipse rich ajax platform project (RAP)

mission statement: rap enables developers to build rich, AJAX-enabled web applications by using the eclipse development model, plug-ins and a java-only api

RAP implements a subset of SWT, JFace, Workbench APIs

- is built on top of Equinox, running in server environments
- provides the Eclipse extension point mechanism
- enables single sourcing of rich client and rich internet apps
- uses the Qooxdoo JavaScript library for client side rendering in the browser

RAP enables

- coding in Java, developing the UI with SWT, JFace and Workbench extension points
- running the application on the server
- and accessing it with a browser

# features



- broad coverage of SWT apis
- broad coverage of JFace apis
  - includes JFace databinding
- basic coverage of Workbench apis
  - `org.eclipse.ui.workbench`
  - `org.eclipse.ui.views`
  - `org.eclipse.ui.forms`

# features in action



http://rap.innoo pract.com/rap

**RAP Showcase**

User Help

Login/Logoff Registration + Add talk to my schedule ? Help Content

Explorer

- Me: (please login)
- Contacts
- Outgoing contact requests
- Incoming contact requests

Tracks

- Database Development Track
- Director's Choice Track
  - (BOF) Committer and Pro...
  - (L) Login and Go: Flipping
  - (L) Migrating a Visual Stuc
  - (L) RAP - Eclipse style dev
  - (P) Eclipse Community Pro
  - (S) Due Diligence - Why d

Map

Talk Details Intro

Map

Search People Talk Comments My Schedu

Date/Place	Title
Wed 14:30-15:20 Great America Ballroom JK	RAP - Ec

Forms Demo View

Hello, Eclipse Forms

Text field label:

An example of a checkbox in a form

Push Button

Text Hyperlink with `setUnderline( true )`

**Expandable Composite title**

We will now create a somewhat long text so that we can use it as content for the expandable composite. Expandable composite is used to hide or show the text using the toggle control

Section title

# features – by new and noteworthy



- [http://wiki.eclipse.org/index.php/Rap10M2\\_News](http://wiki.eclipse.org/index.php/Rap10M2_News)
- [http://wiki.eclipse.org/index.php/Rap10M3\\_News](http://wiki.eclipse.org/index.php/Rap10M3_News)
- [http://wiki.eclipse.org/index.php/Rap10M4\\_News](http://wiki.eclipse.org/index.php/Rap10M4_News)
- [http://wiki.eclipse.org/index.php/Rap10M5\\_News](http://wiki.eclipse.org/index.php/Rap10M5_News)
- [http://wiki.eclipse.org/index.php/Rap10M6\\_News](http://wiki.eclipse.org/index.php/Rap10M6_News)
- [http://wiki.eclipse.org/index.php/Rap10RC1\\_News](http://wiki.eclipse.org/index.php/Rap10RC1_News)

## non-code aspects

the project has received the



- the award honours and recognises the most remarkable and outstanding european contributions in the world of Java and Eclipse
- the project provides a getting started and various articles on the eclipse wiki
- there is extensive API documentation (2349 javadocs)
- a huge set of resources available for RCP can be reused for RAP
- RAP is a runtime technology and not installed into the Eclipse IDE
- i18n is not yet implemented as the mechanism provided by the platform (static constants loaded at start-up) can not be used in a multi-user environment



- RAP provides a subset of the proven SWT, JFace and Workbench java apis and extension points
- more than 1000 published and documented interface methods from the above mentioned packages

- RAP Workbench extension points
  - actionSetPartAssociations
  - actionSets
  - commandImages
  - commands
  - commonAction
  - commonExpression
  - editorActions
  - editors
  - handlers
  - menus
  - perspectiveExtensions
  - perspectives
  - popupMenus
  - viewActions
  - views



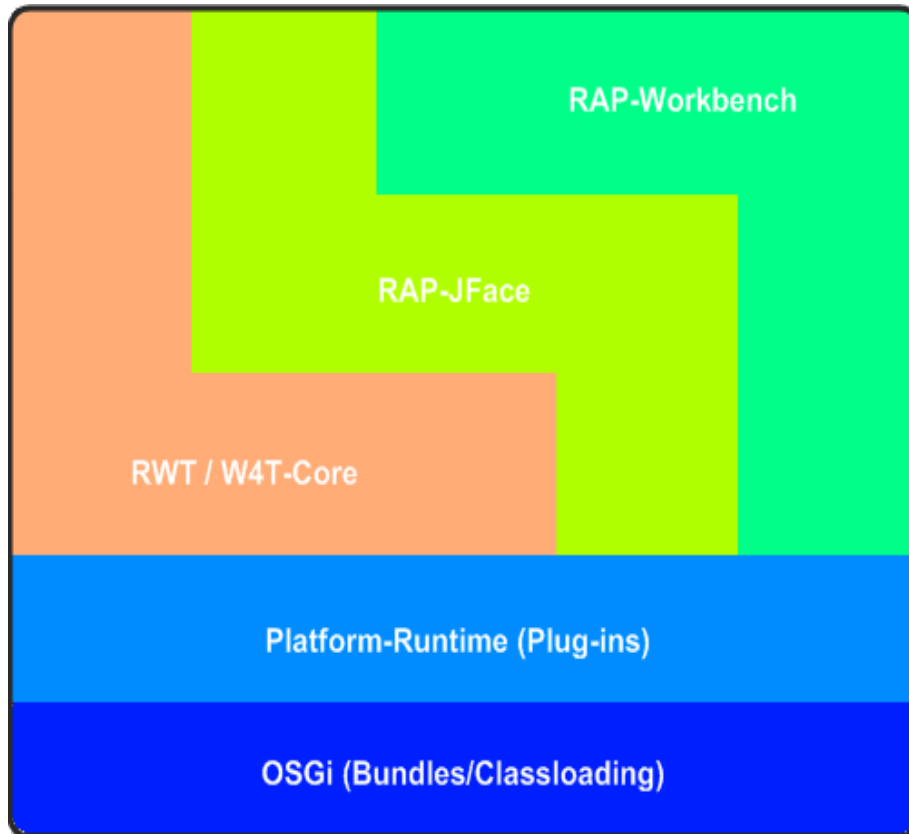
- RAP specific extension points
  - adapterfactory
  - branding
  - entrypoint
  - phaselistener
  - resources
  - themeableWidgets
  - themes

# architectural issues



- RAP enables the usage of the fundamental eclipse architecture for web applications
- RAP uses OSGi bundles and the extension point mechanism
- running on the server side RAP faces the challenge of enabling eclipse bundles to run in a multi-user environment
- RAP is a server centric approach to AJAX
  - scalability has been a key topic for the implementation
  - state information about every client is maintained on the server
  - processing of UI and business logic mainly occurs on the server
- applications can be deployed as standard JEE web applications (war) to standard application servers

# architectural overview



**Server Side (JEE Servlet Container)**

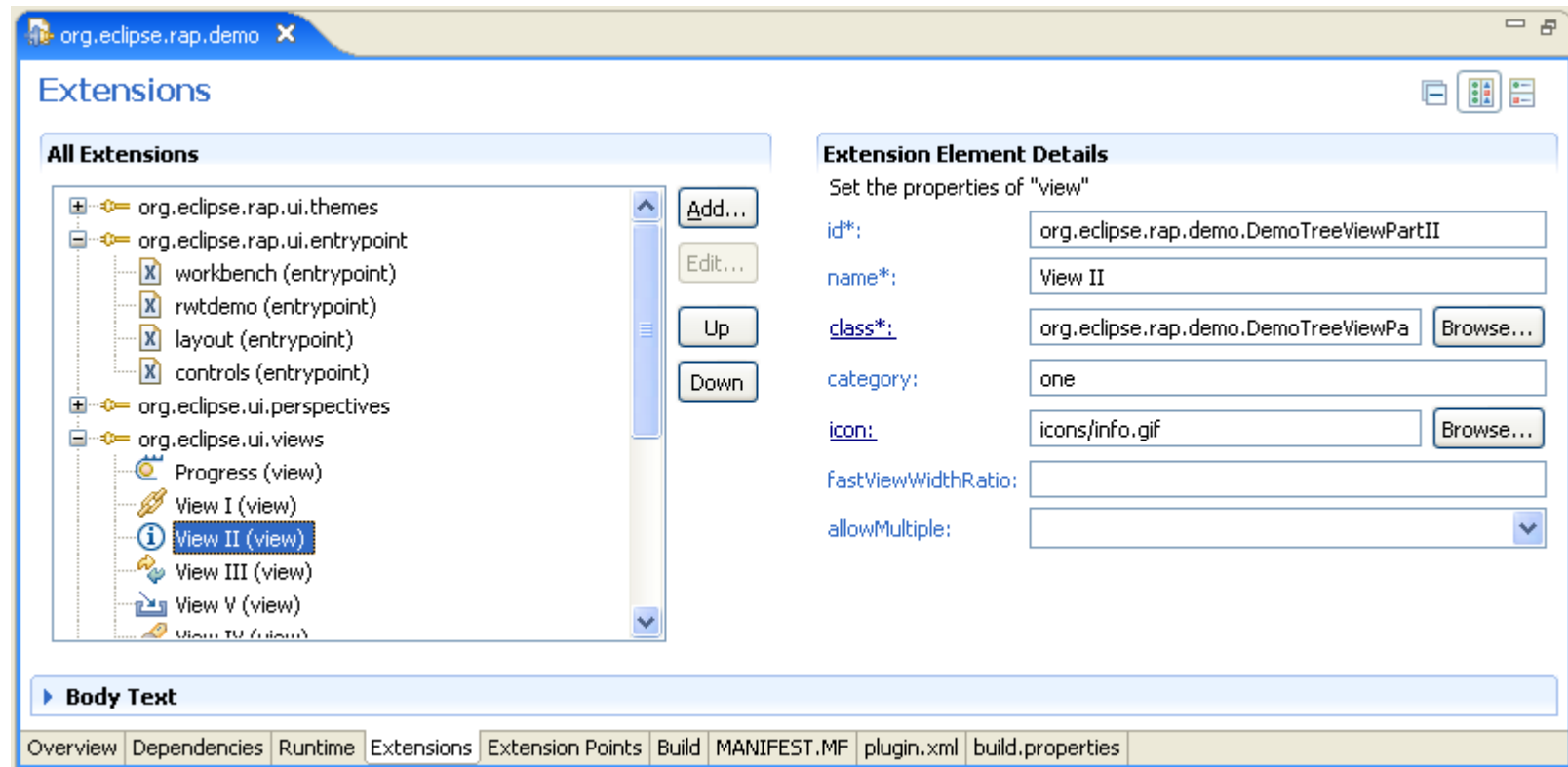


**Client Side (Browser)**

# tool usability



- RAP is a runtime technology and not installed into the Eclipse IDE
- however, PDE and JDT provide a well established and superb tooling infrastructure for RAP



# tool usability (cont'd)



The screenshot shows the Eclipse IDE with a Java file named `*DemoTreeViewPart.java` open. The code defines a class `DemoTreeViewPart` that extends `ViewPart` and implements `IDoubleClickListener`. The class has a private field `viewer` of type `TreeViewer`. The `createPartControl` method initializes the `viewer` and sets its label provider. The `viewer.setContentProvider` method is currently being edited, and a tooltip is displayed over it. The tooltip lists several methods of the `AbstractTreeViewer` class, with `setContentProvider` highlighted. The tooltip text states: "The AbstractTreeViewer implementation of this method checks to ensure that the content provider is an ITreeContentProvider." The IDE interface includes a toolbar at the bottom of the editor with navigation arrows and a prompt: "Press 'Ctrl+Space' to show Template Proposals".

```
org.eclipse.rap.demo *DemoTreeViewPart.java x
+ * Copyright (c) 2002-2006 Innoopract Informationssysteme GmbH.

package org.eclipse.rap.demo;

+import java.util.ArrayList;

public class DemoTreeViewPart extends ViewPart implements IDoubleClickListener {

    private TreeViewer viewer;

- public void createPartControl( final Composite parent ) {
    viewer = new TreeViewer( parent );
    viewer.setLabelProvider( new DecoratingLabelProvider( new LabelProvider(),
                                                         new LeafStarLabelDecorator() );
viewer.setC
viewer.
viewer.
getSite
)
- private f
- public
    if (
```

The AbstractTreeViewer implementation of this method checks to ensure that the content provider is an ITreeContentProvider.

Press 'Ctrl+Space' to show Template Proposals

# end-of-life



- does not apply as this is the first release

# bugzilla



- as of Sept 26

		Severity						Total	
		blocker	critical	major	normal	minor	trivial	enhancement	Total
Status	NEW	.	.	.	36	3	.	1	40
	ASSIGNED	.	.	.	28	2	.	5	35
	REOPENED	.	.	.	2	.	.	.	2
	RESOLVED	3	7	8	143	8	5	16	190
	VERIFIED	.	.	.	8	.	.	3	11
	CLOSED	.	.	.	3	.	1	.	4
	Total	3	7	8	220	13	6	25	282

Bugzilla query: [https://bugs.eclipse.org/..](https://bugs.eclipse.org/)

# standards



## JEE

- RAP complies with the JEE servlet standards 2.3, 2.4 and 2.5
- RAP applications can be deployed as standard web archives (war)

## OSGi

- RAP is built on top of the Eclipse Equinox OSGi reference implementation

## Eclipse

- the Eclipse extension point mechanism is a defacto standard utilized by RAP



# ui usability



- RAP is a runtime technology and providing developers with means to develop applications
- RAP enables developers to build applications that can be compliant with the Eclipse User Interface guidelines
- It is important that RAP also enables the development of UIs that are very different from the Eclipse UI
  - RWT (RAP SWT implementation) adds theming to allow the UI to be customized ([http://wiki.eclipse.org/RAP\\_Theming](http://wiki.eclipse.org/RAP_Theming))
  - Branding support allows for customization of web application meta-info and general application parameters

# schedule



- <http://wiki.eclipse.org/RapPlan>
- # 2006-06 - 2006-09 initial code contribution
- # 2007-02 M1: Basic WebWorkbench implementation
- # 2007-03 M2: extending workbench functionality
- # 2007-04-27 M3: move to org.eclipse.swt, org.eclipse.jface, org.eclipse.ui namespaces
- # 2007-06-08 M4: move to gooxdoo 0.7, finalize move to a RCP API subset, adapt code base to RCP 3.3, theme management
- # 2007-07-13 M5: background process management, branding functionality, performance optimization, client side font size calculation, data binding (done)
- # 2007-08-17 M6 Provide all API for Release 1.0
- # 2007-09-28 RC1 code freeze

the release date has been shifted in april from end of june to end of sept



- **committers**
  - 6 committers from Innoopract
  - 1 (until now) inactive committer from CAS
  - 1 committer from qooxdoo project (from 1and1) in process – will enable us to patch qooxdoo if needed
  - 1 request for contributing several components – will be processed shortly
  - -> committer diversity is improving but needs some work
- **contributors**
  - active bugzilla users from several companies / individuals
  - a few patches have been contributed
  - we see more bugs with test-cases proving the bug attached
- **users / adopters**
  - as RAP is not a tool the distinction between users and adopters is difficult, everybody that uses rap is incorporating it in its products (apps)
  - active community of users / adopters: 1217 newsgroup postings

# communities cont'd



## conferences:

- participation in several conferences
  - EclipseCon 2007, Eclipse Summit Europe 2006, Jax 2006 / 2007, JFS 2006 / 2007, AjaxWorld 2006, EcilpseWorld 2006, OSGi days 2007

## cross project:

- active discussions with the eclipse project teams for api synchronisation
- participation in Equinox Summit – synchronization with Equinox project with respect to OSGi on the server side

## articles:

- article published in German “Eclipse Magazin”
- article series planned for developerWorks (by Chris Aniszczyk)

# communities / process



- open and transparent planning (using the wiki)
- development has been driven by the community to a large extent
  - Requesting move from W4T to SWT api
  - Requesting ability to single source RCP and RAP
    - Requesting moving the package names to SWT / JFace / Workbench originals
    - Requesting to use original extension point ids
    - Requesting full api compatibility for dialog handling
- developer discussion do often happen off the mailing list -> we are working to improve this

# ip issues



see ip log at <http://eclipse.org/rap/rap-ip.log>

- **committers:**
  - Frank Appel
  - Jordi Böhme
  - Rüdiger Herrmann
  - Jochen Krause
  - Benjamin Muskalla
  - Ralf Sternberg
  
- **third party software:**
  - qooxdoo 0.7 (rev 9276)
    - ipzilla: #1192
    - location: org.eclipse.rap.tools
    - license: EPL/LGPL
    - package subset

# planning



- next release RAP 1.1 planned for feb 2008
  - adding a couple of apis that haven't made it into 1.0
    - i18n of Workbench, JFace and RWT
    - DragDrop
    - KeyEvents
    - MouseEvents

see <http://wiki.eclipse.org/RapPlan11>

- the release after 1.1 is targeted to participate in the Ganymede joined release for June 2008

# thanks for attending



please discuss / cast your vote here:

- [https://bugs.eclipse.org/bugs/show\\_bug.cgi?id=204737](https://bugs.eclipse.org/bugs/show_bug.cgi?id=204737)

- further information:

<http://eclipse.org/rap> - rap open source project

<http://wiki.eclipse.org/RAP> - rap wiki

<http://qooxdoo.org> - javascript widget toolkit

<http://rap.eclipse.org/rap> - demo apps