RAP (The Rich Ajax Platform)

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RAP enables building modular applications for web and desktop based on Eclipse (OSGi) technology with a single code base
Single Sourcing for Desktop and Web Multi-Channel UI

I have heard that for 10 years

AND NEVER SEEN IT WORKING
Please give us the benefit of doubt ...

Open Source is of mediocre quality and is always late

*Eclipse is delivering high quality and in time*

Components are a good idea but component based systems are heavy weight and overly complex

*Eclipse and OSGi provide effective modular systems for millions of users*
We started with what we like about Eclipse plug-ins, plug-ins, plug-ins – bundles too ...

- dependency management
- extension points
- life cycle management

contribution to a common ui (workbench)
- this is called “mashup” in web 2.0
How does that translate to the web?

RAP - enabling single sourcing between RCP and Web

- 80% - 90% reuse is possible
- RAP provides only a subset of RCP!
- needs separation of code that is not compatible
- application needs to become multi-user enabled

We are getting all the things we like about Eclipse
Nice idea – but I don't like RCP in a browser
o.k. - but it does not have to be this way
Web L&F and workbench technology
Discover the workbench: CRM SaaS
Demo
How does it work?

- Replacing SWT with an implementation that can render to browsers

- Everything is pretty much the same

- Multi-user environment: OSGi bundles shared between sessions

- Additional API for web

- RWT uses qooxdoo Javascript library to render widgets in the browser
RWT widgets

- Widget 1.23 (ASCII-kk)
- Control 1.31 (ASCII-kk)
- Button 1.9 (ASCII-kk)
- Label 1.14 (ASCII-kk)
- Link 1.9 (ASCII-kk)
- ProgressBar 1.4 (ASCII-kkv)
- Sash 1.6 (ASCII-kk)
- Scrollable 1.4 (ASCII-kk)
- Composite 1.13 (ASCII-kk)
- Browser 1.8 (ASCII-kkv)
- Canvas 1.6 (ASCII-kkv)
- Label 1.8 (ASCII-kkv)
- Decorations 1.4 (ASCII-kkv)
- CBanner 1.5 (ASCII-kk)
- Combo 1.26 (ASCII-kk)
- CoolBar 1.12 (ASCII-kk)
- CTabFolder 1.16 (ASCII-kk)
- Group 1.13 (ASCII-kk)
- SashForm 1.2 (ASCII-kk)
- scrolledComposite 1.7 (ASCII-kk)
- Spinner 1.13 (ASCII-kk)
- TabFolder 1.11 (ASCII-kk)
- Table 1.35 (ASCII-kk)
- ToolBar 1.9 (ASCII-kk)
- Tree 1.29 (ASCII-kk)
- ViewForm 1.2 (ASCII-kk)
- List 1.11 (ASCII-kk)
- Text 1.18 (ASCII-kk)
Demo
JFace

• Support for all JFace viewers
  ♦ TableView, TreeViewer, ....

• Support for most Viewer concepts
  ♦ Provider (Content, Label, Color...)
  ♦ Sorter
  ♦ Filter
  ♦ Decorator (Image decoration).

• Support for Field Decorations

• New: Cell-Editors

• Wizards
Demo
Workbench: Parts, Perspectives & Interaction

• Full support for views
  ▪ Additional views
    ▪ Outline
    ▪ Properties
• Editor support
  ▪ Multi-page editors available
  ▪ ISaveablePart available
• SelectionService
• Jobs (UIJobs, ProgressView)

• Support for perspectives
  ▪ Perspective Switcher
  ▪ Extensions
• Eclipse 3.3 Menus Framework
  ▪ Commands & Handler
  ▪ Expression support for visibleWhen and enabledWhen

New: ScopedPreferenceStore
New: Activity Support
New: Workbench 3.4
Enabling plug-in reuse

Differences between RCP and RAP

• RAP runs in a multi-user environment
• one OSGi instance for all sessions in RAP
• singletons are shared between sessions
• no implicit thread to session assignment
• resources (images, colors und fonts) are shared
• thin-client architecture (“as-is” port does not always make sense)
• API limitations (no GC, no MouseMove events)
Fragments allow separation of differences

- two fragments per plug-in
  - one for RAP specifics
  - one for RCP specifics
- at runtime, only the plug-in that fits the environment will be installed
- platform specific E-P contributions are moved into the corresponding fragment
- bundle structure stays intact
Find more info on single sourcing here

• Webinar (recordings, new ones upcoming)

• The new RAP book has great tips on single sourcing
Real World Example: Yoxos Install Manager

Welcome to Yoxos
Welcome to the Yoxos Install Manager (YM).

The YM will inform you frequently about
updated plug-ins, that are available for
download.

Enter Yoxos Account Data
Edit Proxy Settings
Yoxos Homepage
Inspector View

Yoxos Install Manager – Eclipse Platform – /Users/jb/Documents/workspace.eclipseconf

Distribution Version: 2.3.8

- Graphical Editors and Frameworks
- Java Development
- Models and Model Development
- Mylyn
- Quality Assurance
- Runtime
- Source Code Management
- Sources
- Web and JEE Development
- Yoxos Workspace Provisioning
- RCP/Plug-in Developer
- Rich Ajax Platform

Total download size: 12.94 MB
Save As Profile Start Installation

Information

Name: RCP/Plug-in Developer
ID: -868129468_1203489789: Provider
Version: 
Download Size: 
Environment: 

Description:
Developers provides superior Java editing with incremental compilation, the Plug-in Development Environment (PDE), an XML Editor, Mylyn, complete source code for the Eclipse Platform, and much more.
Real World Example: OnDemand Service
Styling RAP applications

- Transparency implemented
- Background Images implemented
- Alpha shading implemented
- Controlled by CSS files
Presentation API

Factory based, individually styled

- Views
- Toolbars
- Menubars
Investing into finding patterns that work for both Desktop and Web

Enable Users and / or „Assemblers“ to adapt the UI
RAP 1.2 - Roadmap

Integrate into Platform / e4
- Move RWT to SWT
- Use SWT Browser Edition for client side rendering
- Introduce a protocol to enable more client technologies

Functionality
- KeyListener
- Drag&Drop

Styling
- Rounded borders
- further improve ability to style (using CSS)
- client side gradients, animation, decoration
draw2d – only with community contribution

• prototype using Flash in the browser
Get the RAP - http://eclipse.org/rap

Demos
See some demos here

Downloads
Get the latest RAP release

The RAP project enables developers to build rich, Ajax-enabled Web applications by using the Eclipse development model, plug-ins with the well known Eclipse workbench extension points, JFace, and a widget toolkit with SWT API (using qooxdoo for the client-side presentation). The project has graduated from incubation and released its 1.0 release.

Learn more ...
References

• http://www.eclipse.org/rap - RAP project page
• http://wiki.eclipse.org/RAP - RAP project wiki
• http://www.qooxdoo.org - qooxdoo js library
• http://dev.eclipse.org/.../eclipsecon2005-presentationsAF

• Check our newsgroup, it is a busy place and questions get normally answered quickly:

An exemplarly commercial app: http://www.cas-pia.de