Web Development with the Eclipse Platform

Open Source & Commercial tools for J2EE development
Agenda

- Currently available Tools for web development
- Enhancements in Eclipse 3.0 targeting web toolability
Eclipse is (still) missing Web Tools

- Example that Eclipse needs to find its way in some areas
- Lack of leadership, missing a defined scope
- Eclipse learned from that regarding the creation of new projects
- It seems like there will be a new leadership from an organization with a track record in that area short term, but it is not yet announced

But even without Web Tools there is a wealth of tools targeting web development

- J2EE
- Web specific languages
- Special frameworks
- Database tools / Persistence tools

Come to the BOF tonight: 8:00 PM Coronado E – Lower level
For J2EE Lomboz & MyEclipse fill the gap

- We have seen a lot of useless fights about these two offerings
- Everybody is free to offer commercial solutions based on Eclipse
- Users have the full choice regarding their preferred plugins

IBM WSAD is offering the full stack of J2EE development
Lomboz

- Multiple profiles for each Server Type
- Wizards for Servlets, JSPs, EJBs
- JSP Editor

- No native JSP debugging yet

Lomboz has joined the ObjectWeb consortium. In this new framework, iteration will evolve Lomboz into a generic open source infrastructure for J2EE tooling.
MyEclipse extends Eclipse to a J2EE IDE

J2EE Project Types
- Web, EJB, and Enterprise Projects

Web Development Tools
- Advanced JSP, HTML, XML, Struts, CSS editors
- Struts development tools
- Native JSP source debugger
- Creation wizards for JSP, HTML, Struts, Servlets, Applets
- Integrated HTML preview mode
- JSP and XML validation

Subscription model
~30 USD / year
Tools for special frameworks

Struts Studio
- Allows visual editing of page flow
- JSP Editor
- …

Check out their Video at www.exadel.com
Tools for special frameworks

W4T Eclipse

- Drag & Drop for Web UIs
- Widget based
- Will support JSF

- Video Demo at w4toolkit.com
Tools for Web specifics (selection)

JavaScript
- Syntax highlighting
- Code Assist
- Problems view (Tasks view)

CSS
- Syntax Highlighting
- Problems view

Quick Demo

Many projects on Sourceforge – think about participating
Database & Persistence tools

- DB Edit
- DB Explorer
- Clay Database
- JFaceDBC
- Quantum DB
- ...

- Hibernate Synchronizer
- Hibernator

- Couple of JDO Plugins from JDO vendors

Integration with web development suites still to be improved
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Eclipse 3.0 – SWT Browser Widget

- Based on Internet Explorer for Windows Platforms, Mozilla for Linux, Safaris for Mac OS (not released), Support for QNX
- Preview your HTML cross platform in Eclipse

Code Example:

```java
Browser browser = new Browser( parent, SWT.NONE );

// render text from memory
String html = "<html>
              + " <head><title>Demo</title></head>
              + " <body>Demo</body>
              + "</html>";
browser.setText( html );

// load resource from url
browser.setUrl("http://eclipse.org");
```
Browser Widget advanced functionality

Java to JavaScript two-way bridge

- Talk to the „Web page“ through DOM
- Java API to access Browser specific DOM

Embedding of SWT inside web pages

- Extend HTML with rich swt widgets
- Supported for IE, Mozilla
- Works as well stand-alone

Have a look at the poster in the ballroom (right hand, near the entrance)
Eclipse 3.0 – Java Family

Generalize JDT to handle more members of the Java family than just Java source files. This includes widening to handle Java-like languages (such as JSP and SQLj), and embracing non-Java files containing references to Java language elements (such as plug-in manifest files and J2EE deployment descriptors).

Improve support for Java-like source files

- index these files so that Java search can find the Java declarations and references within;
- use Java code assist on the Java passages;
- refactoring should be able to take these files into account;
- the debugger should be able to step through the Java passages (JSR-045);
- error highlighting should be supported across sections;
Eclipse 3.0 – Java Family Resources

Source: http://eclipse.org/eclipse/development/eclipse_project_plan_3_0.html#JDT

The Eclipse examples bundle contains a JavaFamily example project.

Status: refactoring/quick fix etc. participant architectures are under development at the moment for 3.0 M7
Eclipse 3.0 – OSGI Web Server service

What is OSGI?
It is the standardization of the way application components should be registered with an application to be loaded/unloaded dynamically at run-time (Laurent Mihalkovic)

- OSGI specifies a web server service as part of its stack supporting >= Servlet 2.1
- Tomcat integrated in Eclipse 3.0 as HTTP server – can be replaced if necessary
Q&A

Don’t forget about the Web tools BOF tonight!