WTP Update: What is new in WTP 2.0

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iteration a.s.

What is new in WTP 2.0 – Naci Dai
Developing JavaEE 5 – Kaloyan Raev
Java Persistence with Dali – Shaun Smith
Outline

- WTP Organization
- What’s new in 2.0
- Upcoming: WTP 3.0
- Demo
WTP Projects and Organization

- WTP provides tools for Web application development
  - Tools for application developers
  - Platform for tool developers/adopting companies

- Subprojects -- are being refactored
  - WST /Web Standard Tools – IETF, W3C, OASIS, WS-I, ANSI, etc
  - JST/ JEE Standard Tools – JCP
  - *WST and JST is an architectural distiction only*
WTP Refactored

- WTP is big, very big!
  - Needed to “refactor” into smaller projects
  - Match components with teams “Component Committer Teams”

**REFACTORED PROJECTS**

**Common**: Common tools and infrastructure

**Server Tools**: Tools and infrastructure to define and interact with servers.

**Source Editors**: xml, dtd, xsd (and sse infrastructure) html, css, javascript, jsp

**Web Services**: wsdl, axis1, axis2, web services framework, web services explorer

**Java EE Tools**: Common Project Infrastructure, JEE models, preferences, classpath model, publish api, refactoring

**EJB Tools**: EJB creation wizards, preferences, future annotation tools

**JSF**: Infrastructure and tools for JSF

**Dali (JPA Tools)**: Infrastructure and tools for JPA applications

**ATF (incubating)**: Infrastructure and tools for ATF

**Datatools (RDB) [obsolete]**

**WTP Incubation** – New sub
- Allow new technologies to grow…
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What is new in 2.0

- WTP Gets better with age!
  - Java EE, JSP Tools
  - Server Tools
  - Web Services and WSDL Tools
  - HTML, CSS, and JavaScript Tools
  - XML, XML Schema and DTD Tools

- And offers more
  - JSF
  - JPA
  - ATF
JSP Editing

- More extensive support for tags
  - Custom tag files (.tag)
  - URI content assist
  - Validation
  - Hyperlinking custom tags

- Better Control over validation
  - Separate JSP Content Validator
JavaEE 5

- Support for deploying JavaEE 5 Projects and Servers
  - Servlet 2.5
  - EJB 3
  - EAR 5
  - JPA
  - More on these later today
Module Dependency and Classpath Management

- Enhanced **J2EE Module Dependencies**
  - Entries on the Java Build Path can now be added to the published structure of J2EE module projects
Enhanced Validation Framework

- Validators can be associated with content-types
  - Additional filename added to content types on the Content Type preference page gets validated by their respective validators
Server Tools

- Better and faster publishing of large projects
  - 70-90% Better Performance

- New server adapters
  - Basic HTTP Server
    - For non-java content
  - JavaEE Perview Server
    - (Embedded Jetty)
    - Run a web application quickly, without waiting to download or install an external server? The new Preview server allows you to do exactly that - it supports static and dynamic web apps
    - Tomcat 6 and others
      - More control over configuration

- Better house keeping (Clean servers / work directories)
Web Services

- Axis2 Web Services tools
  - Web services tools now supports the Axis2 version 1.2 Web services runtime
- Axis 1.4 is also supported
- Enhanced Web Services Explorer
  - Soap Headers
- Better Extensibility
  - Transport
  - Message Types
HTML, CSS and JavaScript

- Base tools offer better formatting and coloring options
- ATF Project adds
  - Alternate full scale JavaScript Editor
  - Browser Tools with in place CSS editing
  - More on these in ATF
JSF Tools is now released with WTP

- Support for JSF 1.1 and 1.2
- JSF-JSP Source Editor Features
  - Enhance productivity for JSF users
  - Simplify JSF tooling extensions for 3rd party adopters
- Examples of user functionality:
  - Component palette
  - Content assist (Bean Tags)
  - Quick Assist and Quick Fix
  - Hyperlink
  - JSF page validation
  - Refactoring support
  - JSF Search Page
  - Visual editor for page flow
  - Faces-Config Editor
- JSF library registry
JPA (Dali)

- Support JPA 1.0
  - JPA supports “The Persistence of Memory”.
  - Dali provides end user tools and APIs to build JPA applications

- Essential JPA and Dali
  - JPA Object-Relational Mappings
  - The JPA Programmer API
  - Deployment Configuration

- Support multiple runtimes
- JPA runtimes are open source, e.g.:
  - EclipseLink (TopLink Essentials)
  - OpenJPA
  - Hibernate Entity Manager
Essential JPA and Dali

- JPA Object-Relational Mappings
- The JPA Programmer API
- Deployment Configuration
Dali Mapping Assistance

- Persistence Properties View

```java
@Entity
public class Address {
    @Id
    private int id;
    private String street;
    private String city;
    private String province; // The column province cannot be found on table Address
    private String country;
}
```

Table: ADDRESS

- ID
- STREET
- ...
- STATE

Persistence Properties View

Map As: Default (Basic)

- Name: Default (province)
- Table: Default (province)
- CITY
- COUNTRY
- Insertable: ID
- Updatable: STATE

Errors (1 Item):
- The column province cannot be found on table Address Address.java
AJAX Toolkit Framework Components

- **ATF Provides**
  - Tools for DHTML/AJAX development
  - Support various AJAX toolkits

- **Browser Tooling**
  - DOM Inspector, DOM Source view, Browser Console, Request Monitor, CSS Tools, etc.

- **JavaScript™ Debugger**
  - Stack Frame, Variables and Script view

- **JavaScript™ Development Tools**
  - Robust JavaScript Tooling

- **Embedded Mozilla Browser**
  - Run/Debug an Ajax application in the Embedded Mozilla Browser

- **Application Deployment**
  - Deployment of an AJAX Application to a server.
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WTP 3.0 enhancements

- WTP 3.0 requirements
- Themes
  - Platform Support
  - Support for Rich Internet Applications (RIA)
  - Java EE 5.0 Support
  - Improved "Out of the box" Experience
Demo

- What can you do?
  - Try them out – download, watch videos, read docs, etc.
  - Participate! Join the community via newsgroup; become a committer on code, docs, or website.
  - Find, report, and/or fix bugs.
  - Develop products and services based on these tools

- More information from:
  - http://www.eclipse.org/webtools