# **►** Breathing new life into JSP with OSGi! Why Bother???

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**y** @rotty3000 | #OSGi #eclipsecon #jspinosgi

#### **E** Outline

- JSP!!! What's the
- meaning of this?
- Bytecode is Better
- **© Initial Problems**
- **©** Compiling
- Designing a Solution
- Key Java EE OSGi
- **Bundles**
- Jasper

- © Compilation javax.tools
- **OSGi Support -**
- org.osgi.framework.wiring
- **o** Phidias
- Liferay JSP Compiler
- Some Details
- **Demo Time**

### **♦** JSP!!! What's the meaning of this?

- Isn't **JSP** a dead tech?
- Enterprises use JSP a lot
  - ∘ find -type f -regex .\*\.jspf? | wc -l
    - Eclipse = 59
    - Liferay = 1696
    - Liferay Plugins = 669

### Bytecode is Better

- Compiled to Bytecode view templates still most efficient server side
  - w.r.t. memory consumption and performance
  - Other compiled to bytecode view tech not as widely known
    - Play Scala Templates
    - Google Soy Templates

#### Initial Problems

- Java EE instantiation model (ServiceLoader, Class.forName, TCCL)
- Limitations to the existing JSP servlet impls required ugly hacks
- Compilation dependencies lead to complex runtime dependencies

### Compiling

- Traditionally JDT load the world compilation strategy
  - JDT is not a small dependency
- Other compilation options non-existent
- OSGi had no way to natively support compilation process

#### Designing a Solution

- Re-use existing tech when possible
- Use JDK compiler API (since Java 6)
- Avoid lots of hacks
- Keep a small footprint
- Limit usage requirements

## **♦** Key Java EE OSGi Bundles

- Key API/RIs are OSGi bundles
  - Servlet
  - JSP
  - o JSTL
  - o EL

Thanks Glassfish!

## Jasper

- Proven and stable
- Has limited dependencies
- Recently solved issues enabling easier OSGi use

Thanks Glassfish!

# **♦** Java SE Support - javax.tools

- Since Java SE 6
- Full blown compiler support
- .. complicated to use

## OSGi Support - org.osgi.framework.wiring

- Since Core R4.3
- Deep classloader & wiring resource access

#### Phidias

- Small OSS bundle which crosses
  - javax.tools
  - org.osgi.framework.wiring
- Provides simplified OSGi aware compiler support
- Alpha (0.3.4)

### **♦** Liferay JSP Compiler

- Extends Jasper with custom
  - JSP compiler which uses Phidias
  - JSP servlet which transparently handles classloading concerns

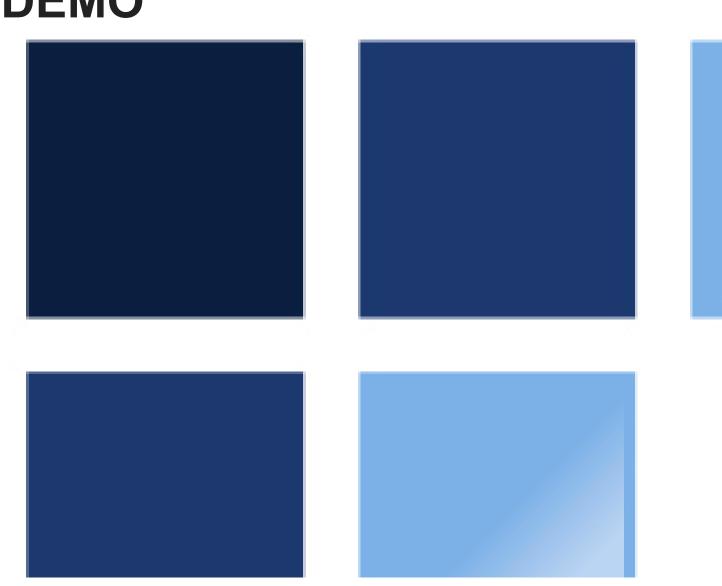
#### Some Details

- Entire JSP support ~ 1.3MB
- Most modern versions of JSP, JSTL, EL available
- No need to declare any JSP related imports in JSP enabled bundles

- No need to include any libs or standard TLDs
- No need to WAB your bundles
  - Can use regular old jar layout + web fragment subtree
    - Place JSPs in META-INF/resources/

#### Demo Time

A Quick DEMO



# OSGi Aware Compilation

- Does this open the door for other interesting topics?
  - Limit compile time view of the world to public APIs?

- Thank you!
  - Questions?