



EclipseWorld 2007

November 6-8, 2007

Using Eclipse to Build Web 2.0 Applications with JSF, Seam, and AJAX

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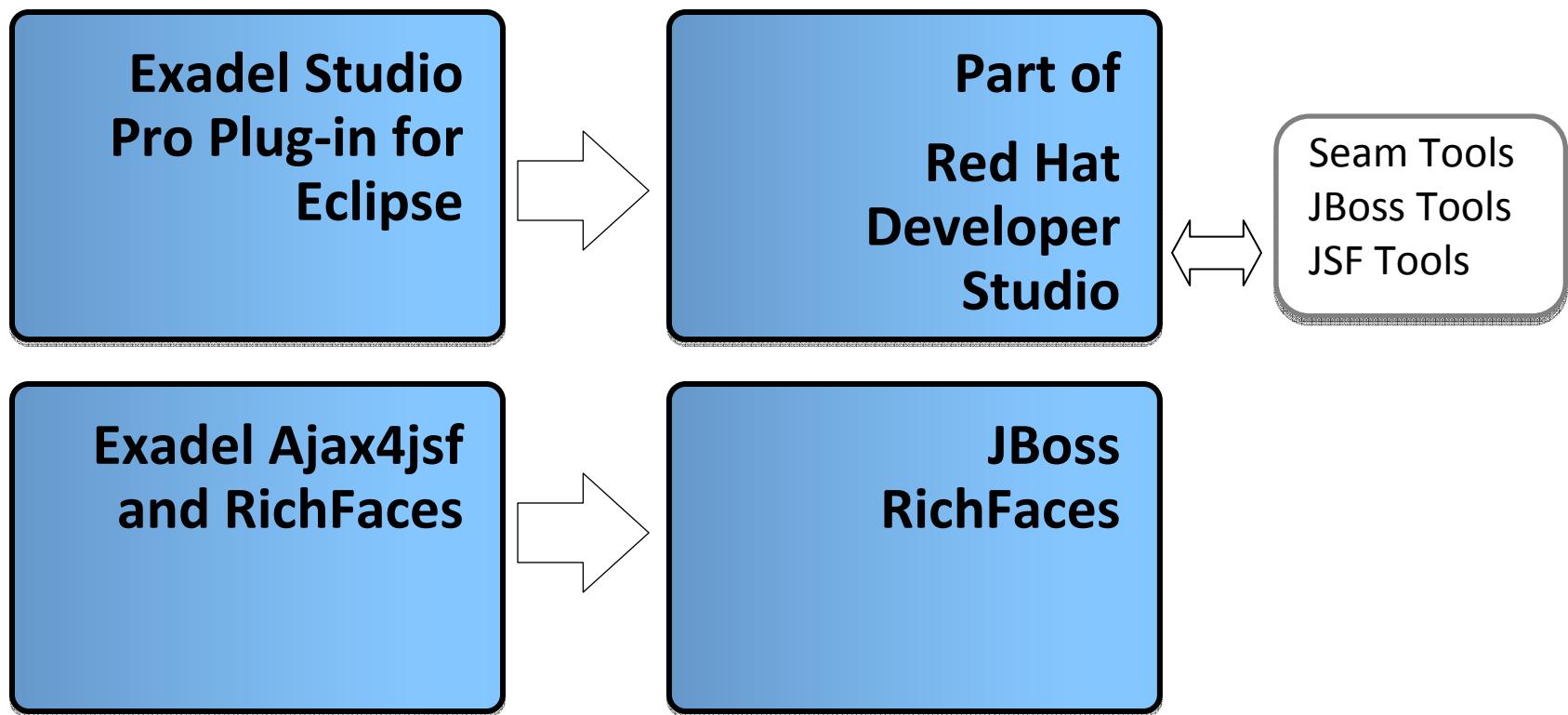
<http://www.exadel.com>

Today's Agenda

- 1) What is JavaServer Faces?
- 2) Rich Internet Applications with JBoss RichFaces
- 3) JBoss Seam
- 4) Red Hat Developer Studio
- 5) Examples
- 6) Q&A

JBoss and Exadel Announcement

March 5, 2007



Technology Stack

JavaServer
Faces with
JBoss
RichFaces

JBoss
Seam

JPA
(Hibernate)

Tomcat

Eclipse: Red Hat Developer Studio

What is JSF?

- Open source, server-side **user interface component** framework for Java-based Web applications
- Applications assembled out of UI components
 - Example: car assembly line
- Official Java EE 5 standard technology for building Web application UIs



JSF Features

JSF Features

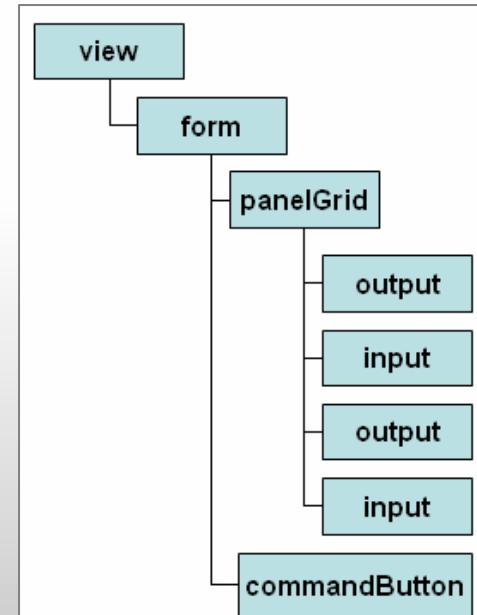
- UI components
- Renderers
- Conversion
- Validation
- Navigation
- Event-based model
- POJO backing beans
- Extendable
- Facelets : templating and re-use
- Swing-like development

Development

Facelets/JSP Page

```
<h:form>
  <h:panelGrid columns="2">
    <h:outputText value="#{msg.emailLabel}"/>
    <h:inputText value="#{login.email}"/>
    <h:outputText value="#{msg.passwordLabel}"/>
    <h:inputText value="#{login.password}"/>
  </h:panelGrid>
  <h:commandButton action="#{login.check}"
                    value="#{msg.btnLabel}"/>
</h:form>
```

JSF Component Tree



Output

HTML

```
<table border="1">
<tr>
<td>Email:</td>
<td><input type="text" name="_id0:_id3" /></td>
</tr>
<tr>
<td>Password:</td>
<td><input type="password" name="_id0:_id5" value="" /></td>
</tr>
</tbody>
</table>
```

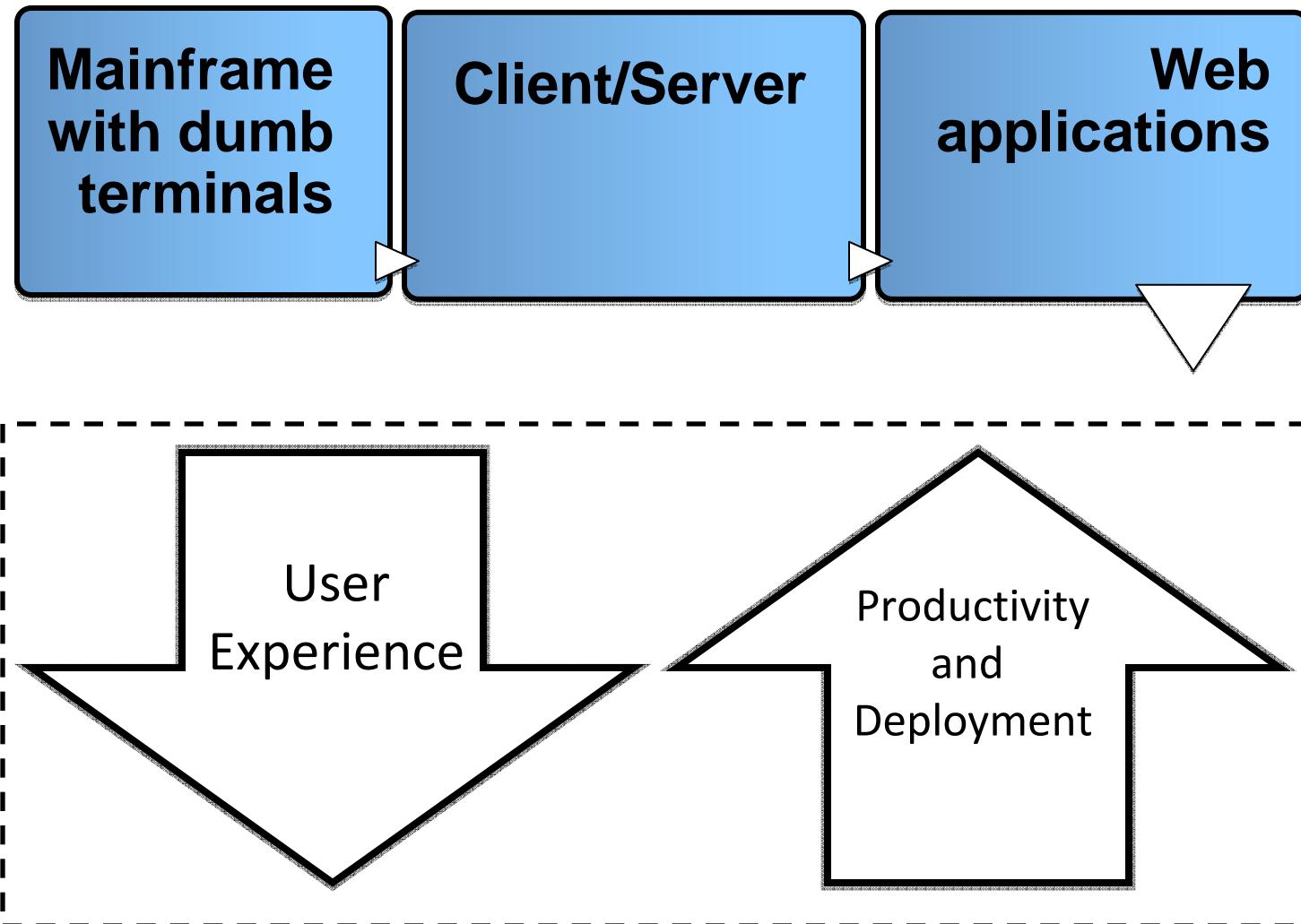
Browser

Email:	<input type="text"/>
Password:	<input type="password"/>
<input type="button" value="Sign In"/>	

The Problem

The Web is not very **interactive**.
Nothing has really **changed** since
1993...click-and-wait
experience.

Some History



Rich Internet Applications/Web 2.0

Web Applications

(low-cost delivery)

+

Rich User Experience

(desktop-like interactivity)

=

Rich Internet Applications

Rich Internet Applications with AJAX

Richer, Faster, more Interactive

Basic Idea Behind **AJAX**:

Send Small Amounts of Data

Update Only a Part of the Page



Thousands of Consumer Web Sites

Businesses Have Taken Notice

The Challenge

AJAX (DHTML, XML, XMLHttpRequest, DOM) development is
challenging

Up to 80% is spent on **battling** browser
incompatibilities

And finally, manual AJAX development **doesn't**
fit the JSF component model

Solution

JavaServer Faces

+

AJAX

=

JBoss RichFaces

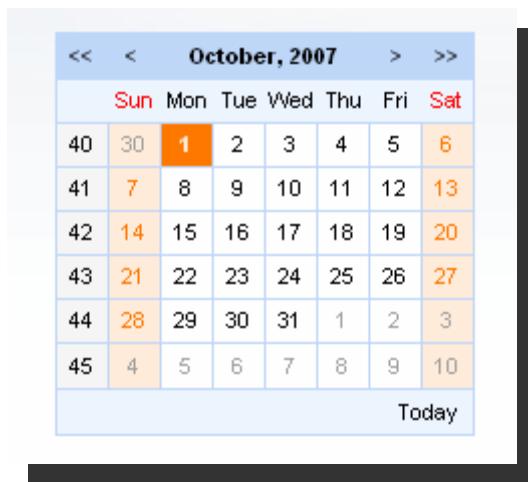
Rich JSF Components

Rich JSF UI Components

C	California	Sacramento	GMT-8
C	Colorado	Denver	GMT-7
C	Connecticut	Hartford	GMT-5



- ▶  Chris Rea
- ▶  Bach, Johann Sebastian
- ▶  Forever Classics
- ▶  Baccara
- ▶  Grand Collection
 - ▶  Sorry, I'm A Lady
 - ▶  Parlez-vous Francais?
 - ▶  Yes Sir, I Can Boogie
 - ▶  Yes Sir, I Can Boogie
 - ▶  Ni Mas Ni Menos
 - ▶  Love Me Please Love Me
 - ▶  The Devil Send You To Laredo
 - ▶  El Porompompero
 - ▶  Sorry, I'm A Lady
 - ▶  Borriquito
 - ▶  Paloma Blanca
 - ▶  A Quien Le Importa
 - ▶  Que Naadie Sepa Mi Sufrir
 - ▶  Me Tienes Desenganada
- ▶  David Miles Huber



50

10 100 20

JBoss RichFaces

RichFaces

- Rich component library for JSF
- Out-of-the-box rich JSF components (50+ components)
- Built-in AJAX Support
- Skinnability
- Quick improvement for user experience

JPA (Hibernate), Tomcat

Easily switch to EJB3
and JBoss AS

JSF with JBoss
RichFaces

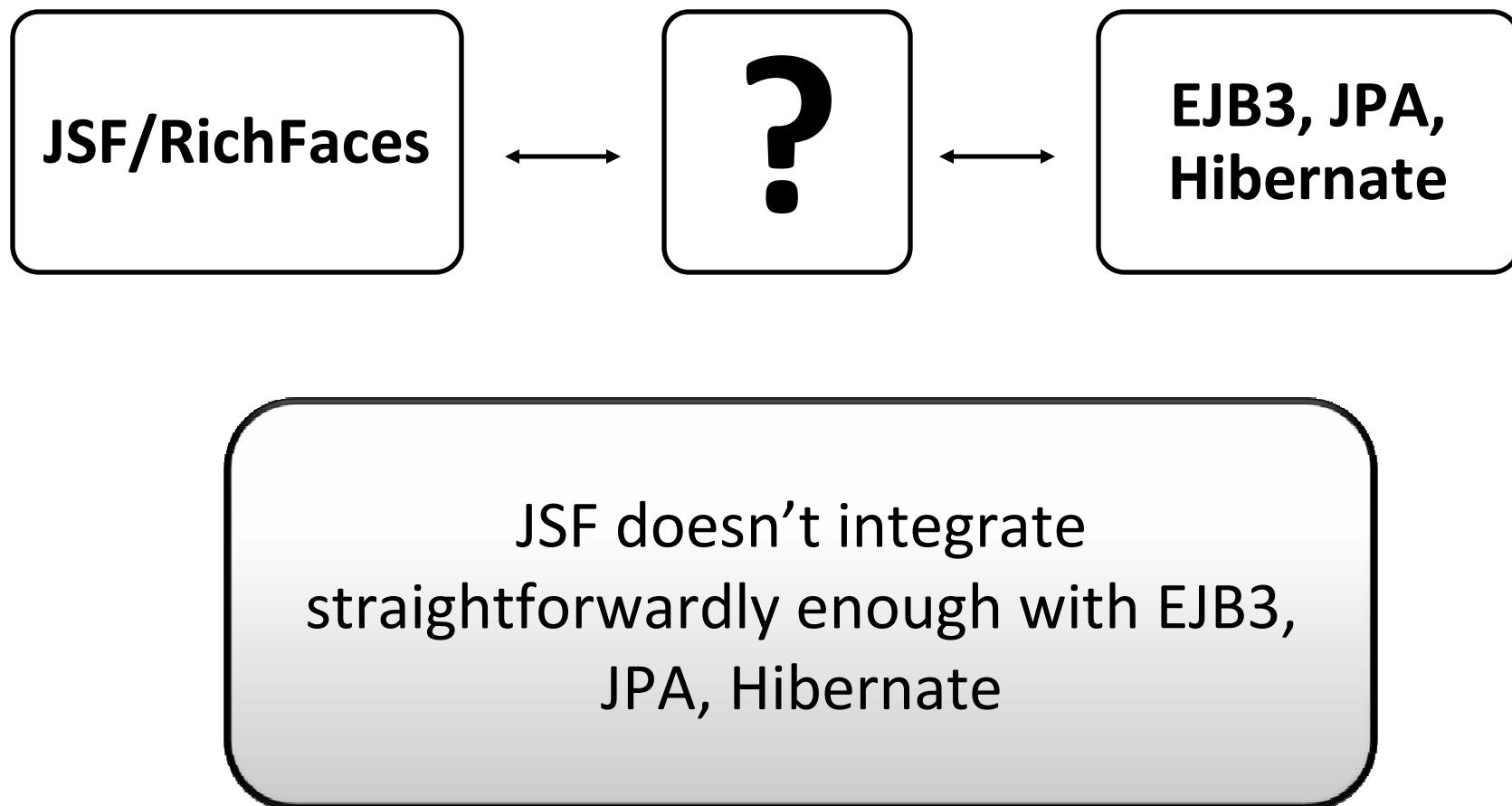
JBoss Seam

JPA
(Hibernate)

Tomcat

Eclipse : Red Hat Developer Studio

JSF: the not so good



JSF : the not so good

- JSF backing beans act as a bridge between the UI, on the hand, and business logic and entities, on the other hand
- XML (faces-config.xml) is used for configuring the backing beans instead of using annotations



JBoss Seam Features

- Unifies JSF, EJB3, and ORM (JPA or Hibernate)
 - No more JSF backing beans
 - Use EJB3 session beans, entity beans, POJOs
- Annotations – no more tedious XML configuration
- “Bijection”
 - Inject a value from a context
 - “Outject” a value to its context variable

JBoss Seam Features

- Conversation scope
- Simplified RESTful-style development
 - Bookmarks, HTTP GET
- Reduction in boilerplate code
- And more much more...

Red Hat Developer Studio

Eclipse 3.3 (Europa)

- Advanced visual and source tools
 - Drag and drop
 - Wizards
 - Visual page editor

JSF tools

jBPM

Seam Tools

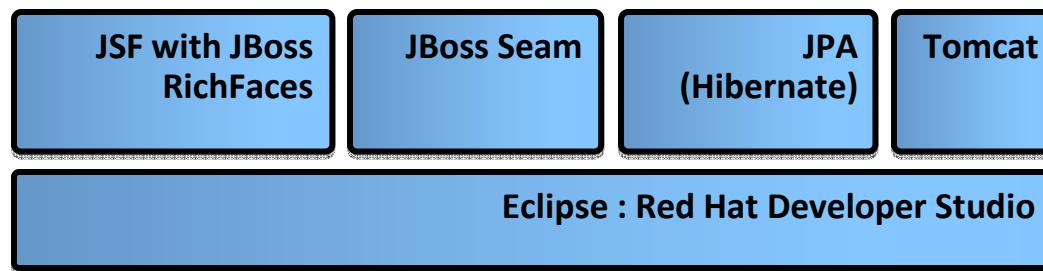
Spring

JBoss Tools

Eclipse WTP

Enough Talking...

Let's build an application.



Summary

- What is JSF?
- AJAX-based applications improve user experience
- JSF and AJAX make an excellent match : JBoss RichFaces
- JBoss Seam unifies JSF with EJB3 and ORM (JPA, Hibernate)
- RHDS provides advanced visual and source development

Exadel Services

**Professional Services with
an Offshore Option**

Eclipse Development

**Development
Boost/Architecture Review**

**JSF, RichFaces Training &
Mentoring**

**Custom Rich JSF
Component Development**

Presentation Tier
JSF, Seam, JSP/Facelets,
Adobe Flex

Business-Service Tier
Spring, Seam, jBPM,
jBoss Rules (Drools)

Data Access Tier
Hibernate, EJB3, Spring
(service/DAO layers), Seam

Web Sites

RichFaces Components Demo

<http://livedemo.exadel.com/richfaces-demo>

RichFaces Project Page

<http://labs.jboss.com/jbossrichfaces>

JBoss Seam Project Page

<http://labs.jboss.com/jbosseam>

Red Hat Developer Studio

<http://labs.jboss.com/rhdevstudio>

Thank You!

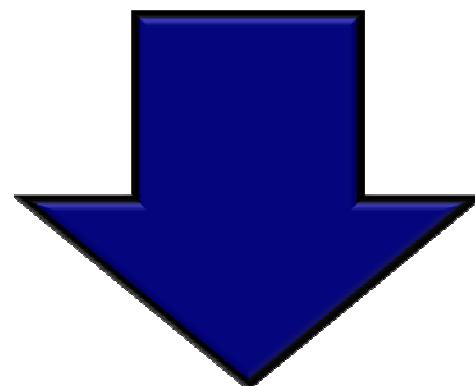
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Questions?

