



EclipseWorld 2007

November 6-8, 2007

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

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Exadel, Inc.

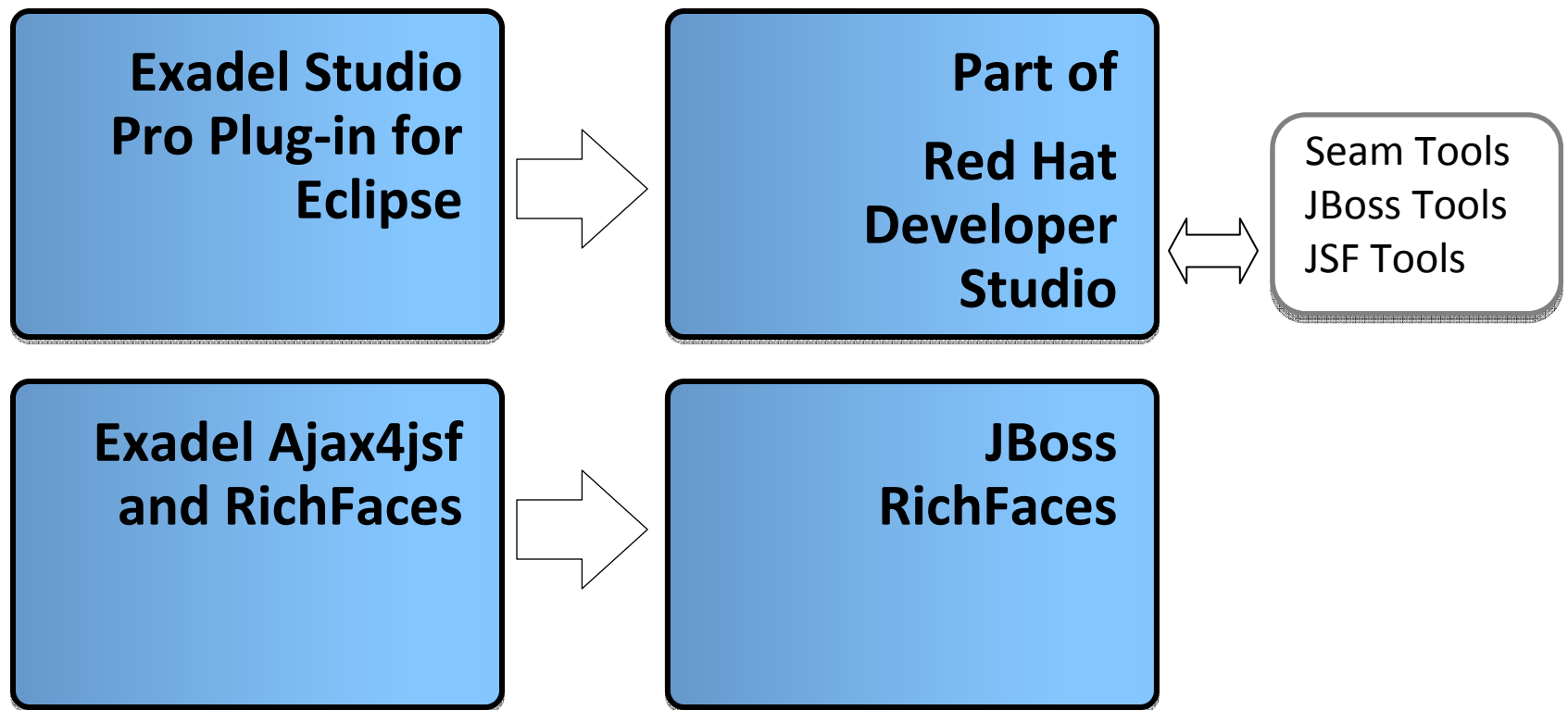
<http://www.exadel.com>

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

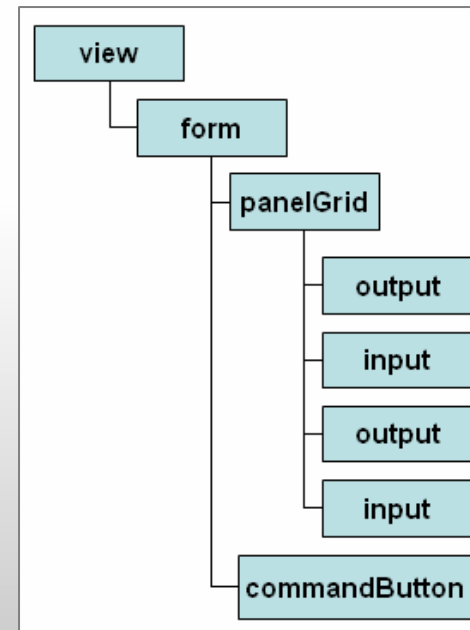
- UI components
- Renderers
- Conversion
- Validation
- Navigation
- Event-based model
- POJO backing beans
- Extendable
- Facelets : templating and re-use
- Swing-like development

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">
  <tbody>
    <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>
```

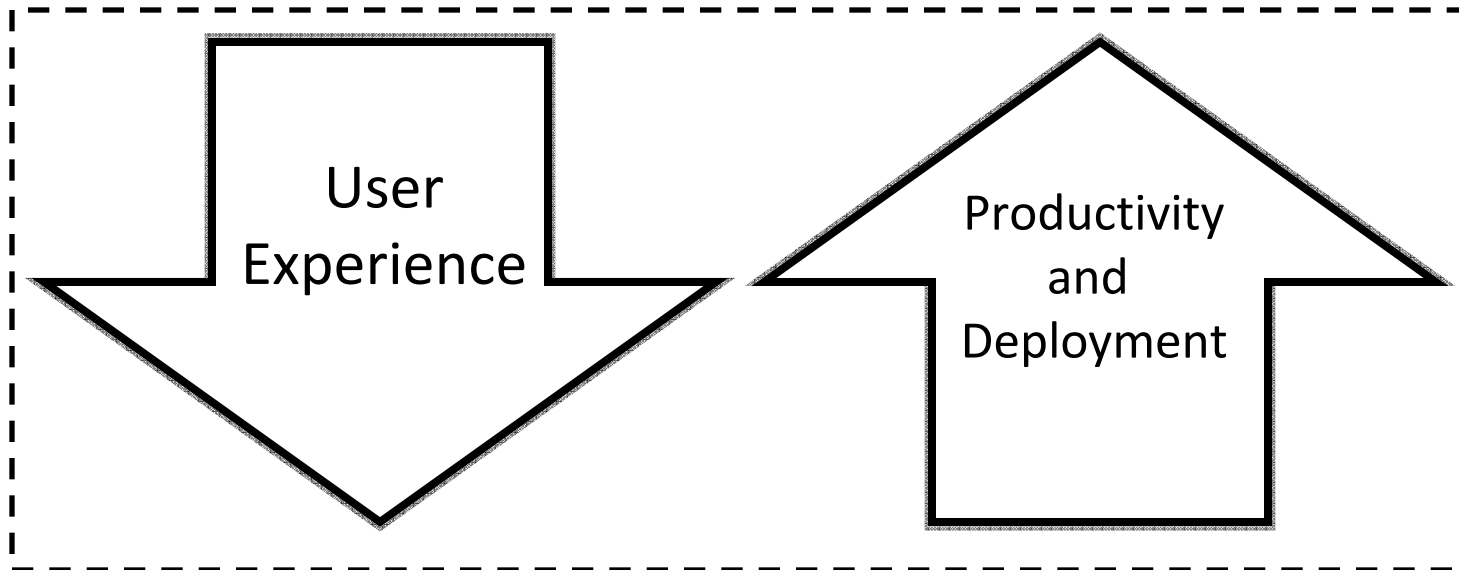
Browser

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
	Colorado	Denver	GMT-7
	Connecticut	Hartford	GMT-5



<<	<	October, 2007					>	>>
	Sun	Mon	Tue	Wed	Thu	Fri	Sat	
40	30	1	2	3	4	5	6	
41	7	8	9	10	11	12	13	
42	14	15	16	17	18	19	20	
43	21	22	23	24	25	26	27	
44	28	29	30	31	1	2	3	
45	4	5	6	7	8	9	10	
								Today

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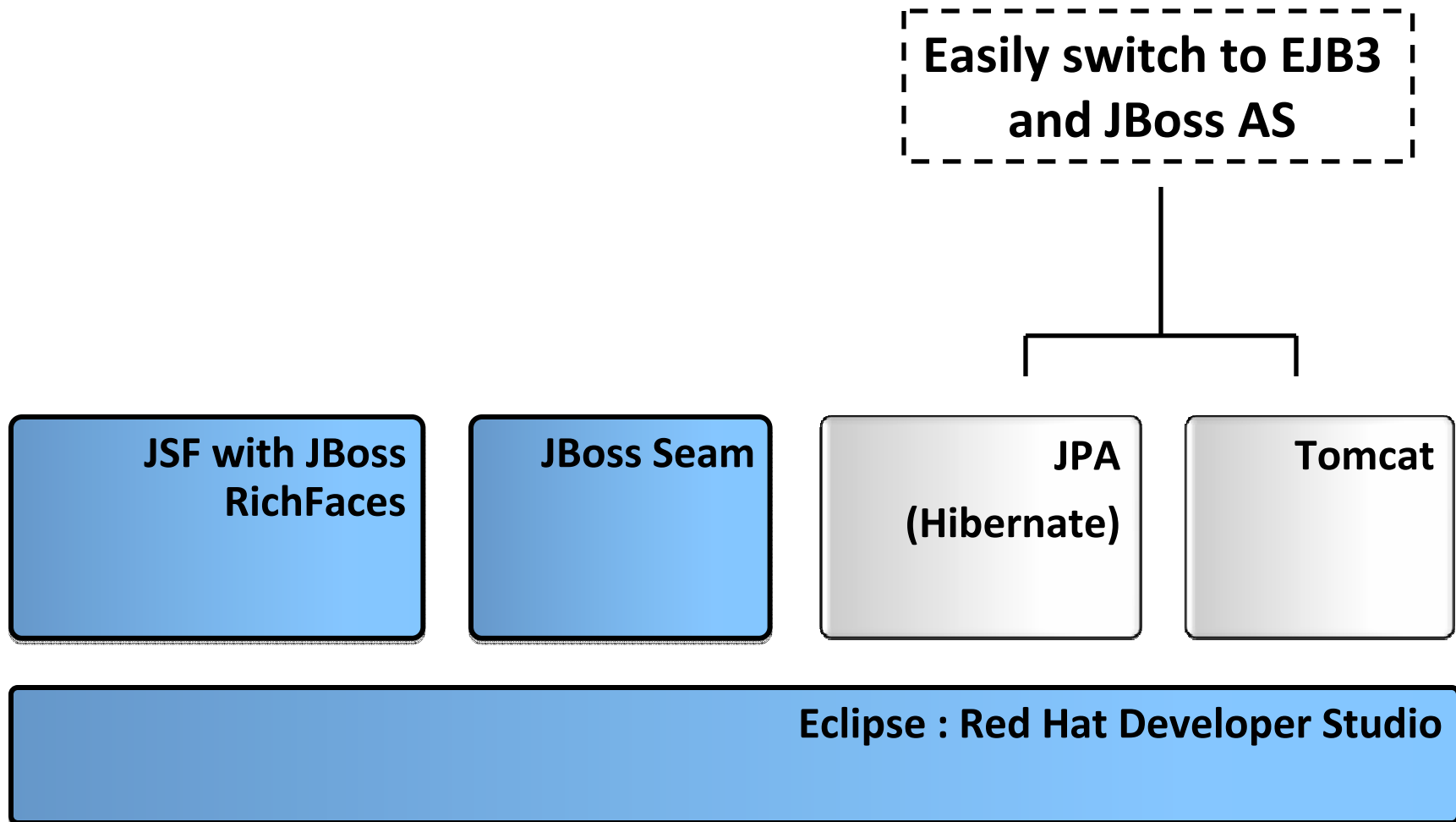
- Chris Rea
- Bach, Johann Sebastian
 - Forever Classics
- Baccara
 - Grand Collection
 - Sorry, I'm A Lady
 - Parlez-vous Francais?
 - Yes Sir, I Can Boogie
 - Yes Sir, I Can Boogie
 - Ni Mas Ni Menos
 - Love Me Please Love Me
 - The Devil Send You To Laredo
 - El Porompompero
 - Sorry, I'm A Lady
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

JBoss RichFaces

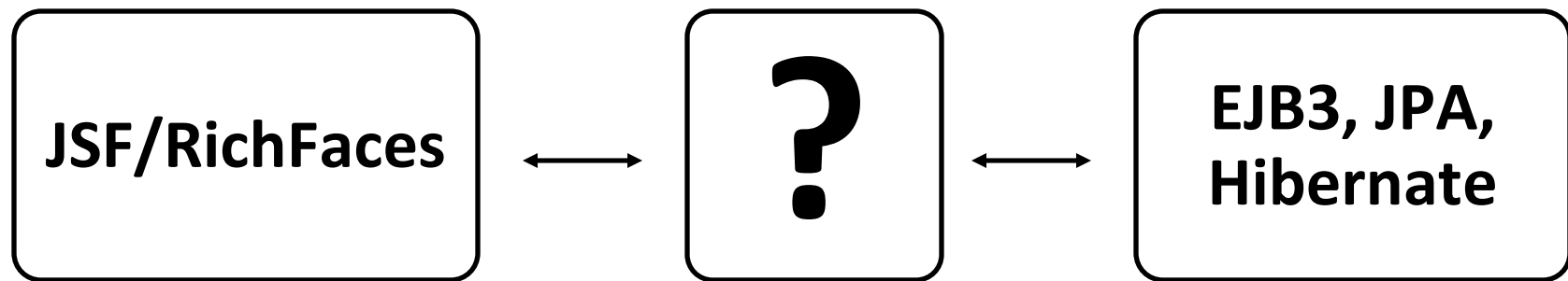
RichFaces

- 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



JSF: the not so good



JSF doesn't integrate
straightforwardly enough with EJB3,
JPA, Hibernate

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

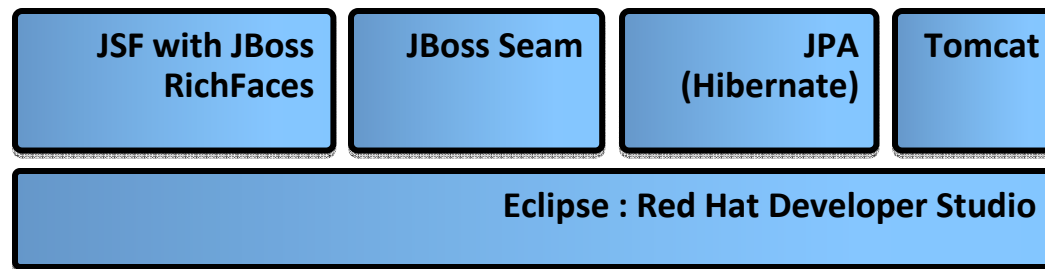
Spring

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/jbossseam>

Red Hat Developer Studio

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

Thank You!

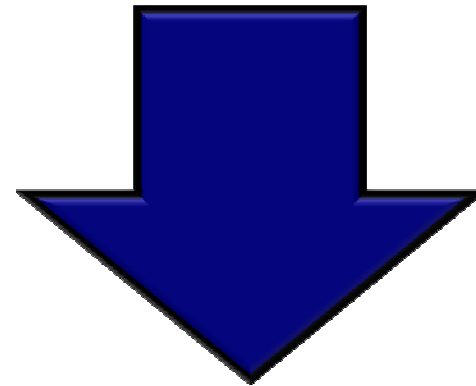
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Questions?

