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RAPID PROJECT CREATION WITH SEAM AND JBDS

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Topics

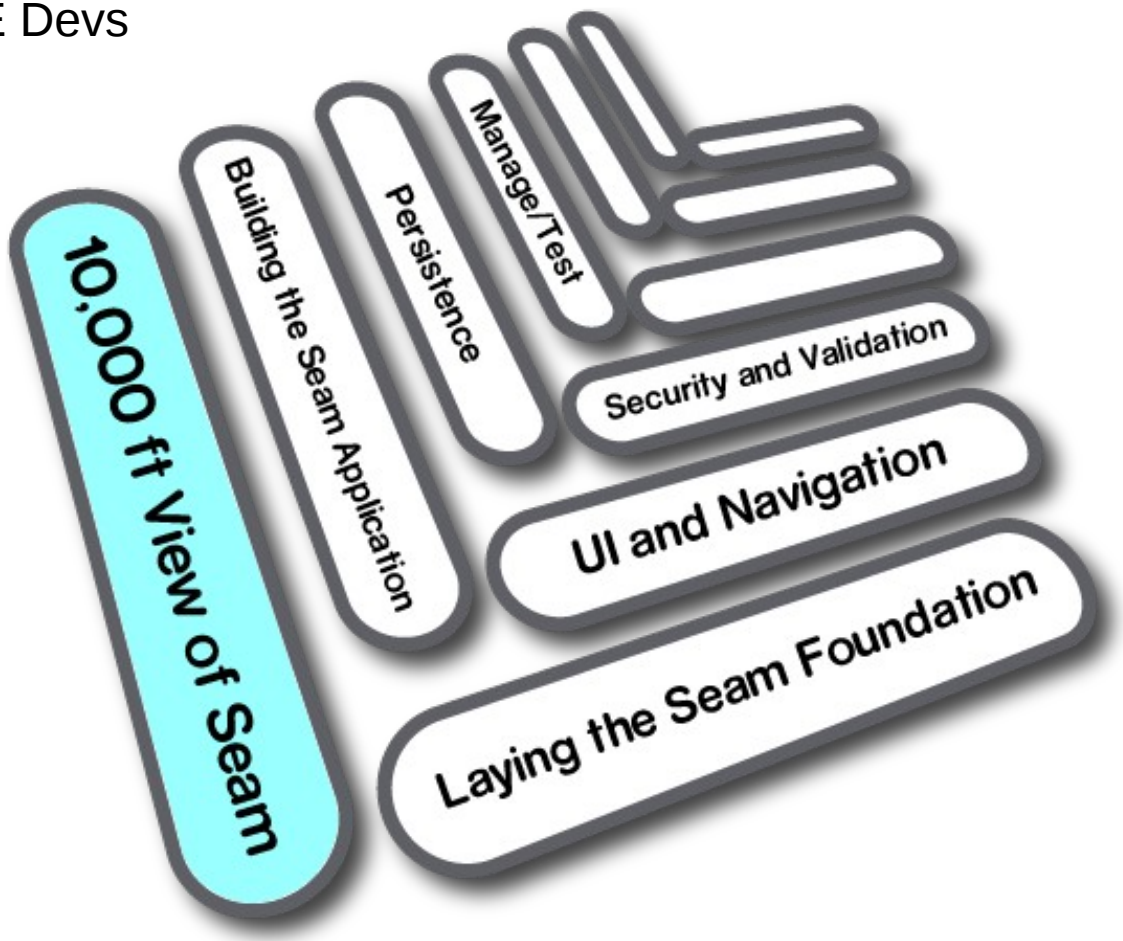
- Introduction – Why You're Here in 5 Easy Minutes
- 10 Minute Seam Crash Course
- Labs!
  - Lab 1 – Create a Fully Functional Seam Project in Minutes with Seam Tools
  - Lab 2 – Code a Seam JSF and Action Class to Access Live Database
  - Lab 3 (BONUS) – Create a Database Table by Pushing an Entity to the Database

Introduction – Why You're Here

- Who am I?
  - Bill Bendrot – Curriculum Manager and co-developer of the JB311 Seam Course
- What is this presentation?
  - Excerpts of Labs from the JB311 Seam Application Development Course

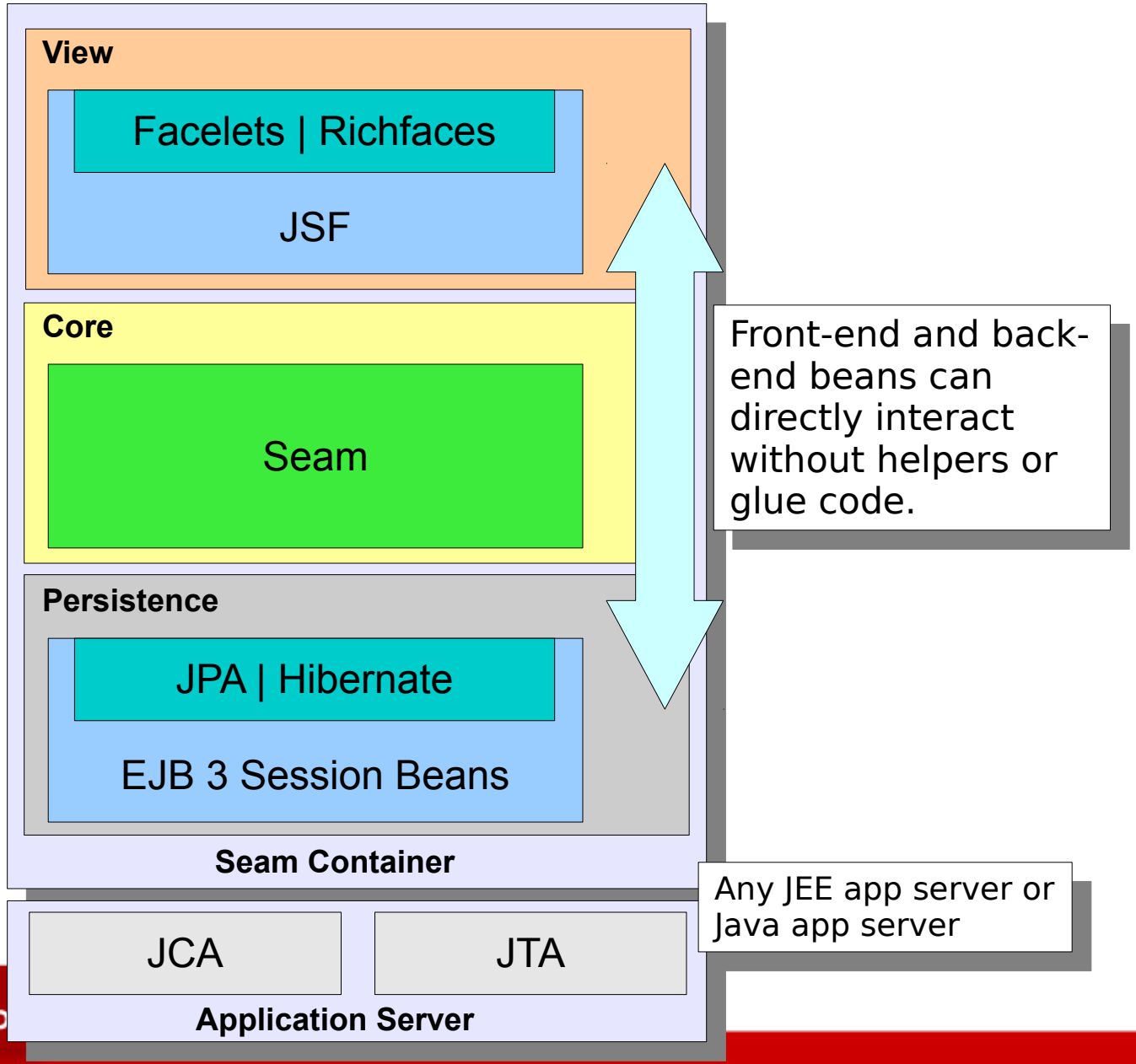
JB311 – Seam Application Development

- JBoss EWP 5 and Seam 2.2
- For Intermediate/Experienced JEE Devs
- 4 Day – Very Hands-On
- Topics Covered:
  - Seam Overview
  - Coming from other Frameworks
  - seamgen and Seam Tools
  - Components and Conversations
  - Bijection
  - JSF Done Right with Seam
  - Automatic AJAX with RichFaces
  - Automatic JPA/Hibernate
  - Using Hibernate Validation
  - Built-in Testing with TestNG and More!

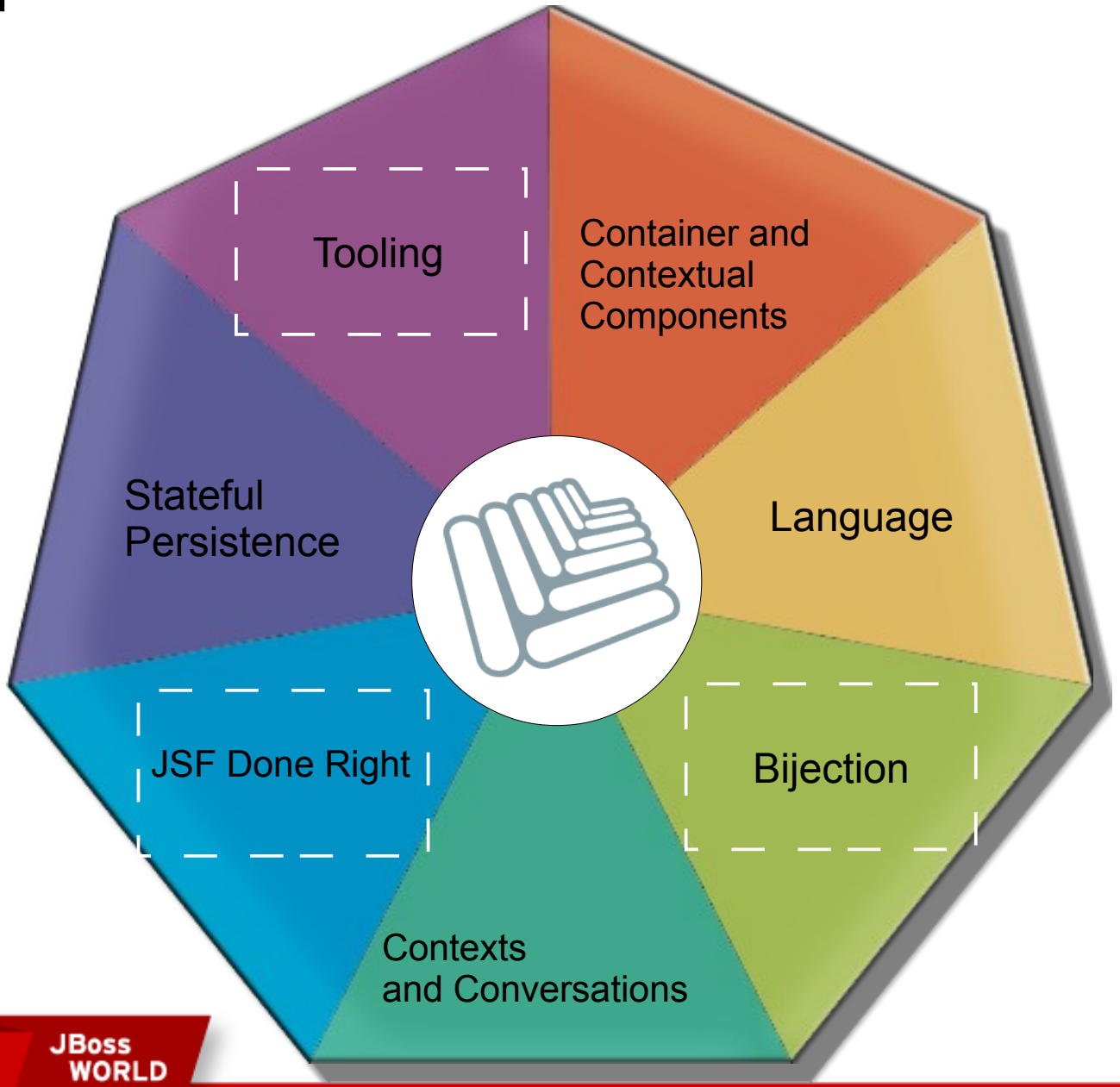


What is Seam?

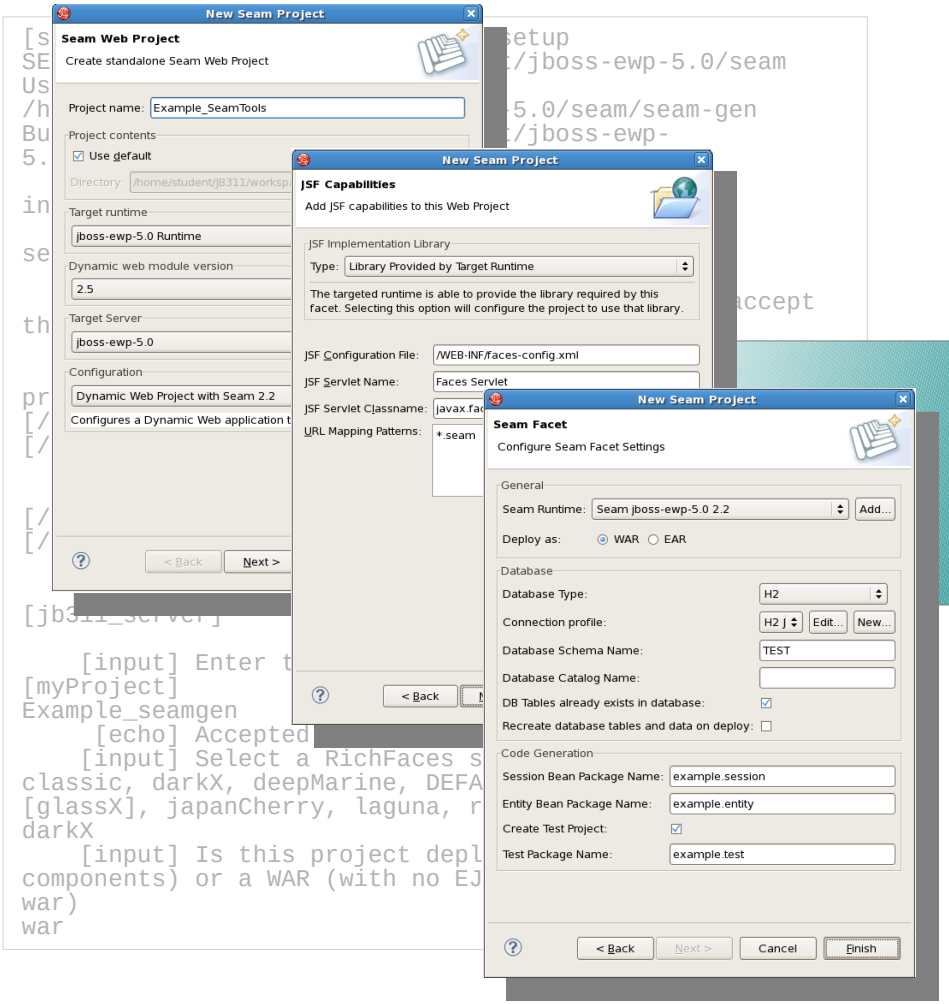
- Application Stack
- Fixes JSF and JEE context gaps
- Easily adds AJAX capabilities
- POJOs almost equal to EJBs
- Persistence, validation, security. transactions and testing all built in
- Ample tooling to speed development



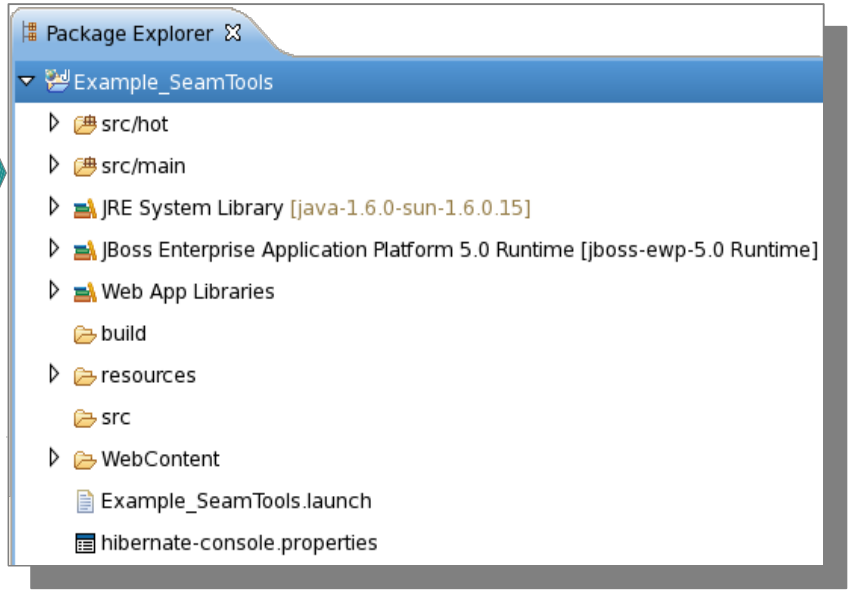
Core Aspects of Seam



Seam Tools and JBoss Developer Studio



Seam Tools provides an Eclipse-based graphical front end to the seam-gen process.



Resulting project is native-Eclipse and has full WTP and Facet capabilities as well as ready access to the other tools available in JBoss Tools.

Bottom-Up, Top-Down, Meet-in-the-Middle

Bottom-Up

- Starts from existing database
  - Hibernate reverse-engineers JPA entities from the schema.
  - CRUD JSFs also automatically built to match the schema and data found.
- Most common scenario
- May require a little 'fine tuning' of data mappings depending on the schema and database

Top-Down

- Starts from existing entity model
  - Hibernate then pushes the entity model to the database.
  - Often requires data scripts to be created to populate these tables.
- Offers developer most flexibility
- Generally only suitable for new projects.

Meet-in-the-Middle

- Combination of Bottom-up and Top-down
  - Requires extensive mapping customization
- Only for situations where a database must be used but cannot be changed
- Most complex of the approaches. Should be avoided if possible.

Main Annotations

- Seam Annotations
  - @Name
  - @In
  - @Out
  - @Begin
  - @End
  - @Factory
  - @Scope
- JEE Annotations
  - @Entity
  - @Stateless
  - @Stateful

```
@Scope(CONVERSATION)
@Name("greetingGenerator")
public class SendGreeting implements Serializable
{
    @In EnglishGreeting greeting;

    @Begin
    public void sayHello() {
       greeting.greet();
    }
```

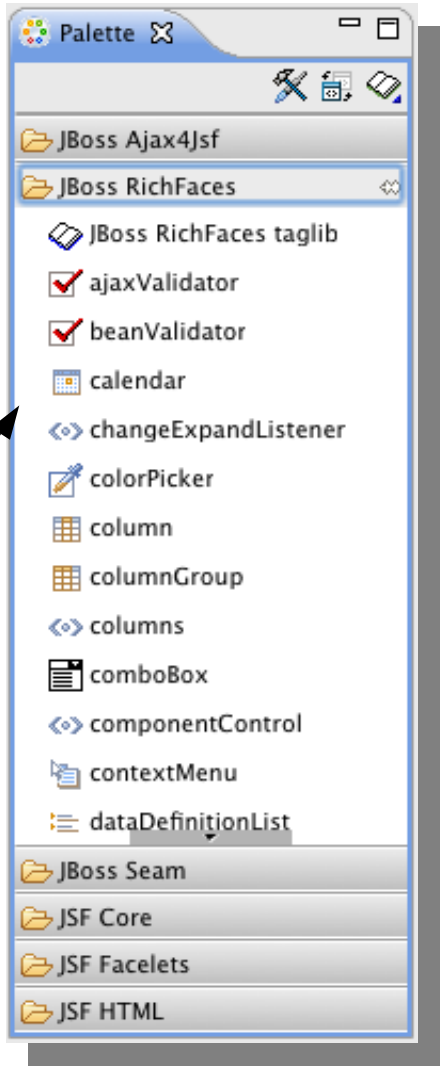
Tag Libraries Available in Seam

```
<rich:panel>
      <f:facet name="header">
            #{addressHome.managed ? 'Edit' : 'Add'} Address</f:facet>


      <s:decorate id="streetField" template="layout/edit.xhtml">
            <ui:define name="label">Street</ui:define>
            <h:inputText id="street" required="true" size="40"
                  maxlength="40" value="#{addressHome.instance.street}">
               <a:support event="onblur" reRender="streetField"
                              bypassUpdates="true" ajaxSingle="true"/>
            </h:inputText>
      </s:decorate>

</rich:panel>
```

Taglib Palette in Seam Tools/JBDS provide easy lookup and drag-and-drop support



Taglibs declared by seam-gen /Seam Tools by default

```
<!DOCTYPE composition PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
    "http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
<ui:composition xmlns="http://www.w3.org/1999/xhtml"
    xmlns:s="http://jboss.com/products/seam/taglib"
    xmlns:ui="http://java.sun.com/jsf/facelets"
    xmlns:f="http://java.sun.com/jsf/core"
    xmlns:h="http://java.sun.com/jsf/html"
    xmlns:a="http://richfaces.org/a4j"
    xmlns:rich="http://richfaces.org/rich"
    template="layout/template.xhtml">
```

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