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OGh Meeting Okt 2005

SOA & ADF

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Question:

**What does an application need
to support a SOA architecture?**

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(an) Answer:

**Developed with the term
“Loosely Coupled” in mind.**

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Coupling Systems and or Components

- Systems can be coupled in many ways, all they need is a published “API” and shared (network) protocol.
- However, there are great advantages when using a standards-based protocol.
- One of the current, popular standards is the Web Service.

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JDeveloper/ADF and Webservices

- Easily **invoke** existing Web Services
- Incorporate existing Web Service results in ADF Web Applications
- Create and deploy Webservices based on plain Java classes.
- Create and deploy data-driven Web Services based on ADF Business Components

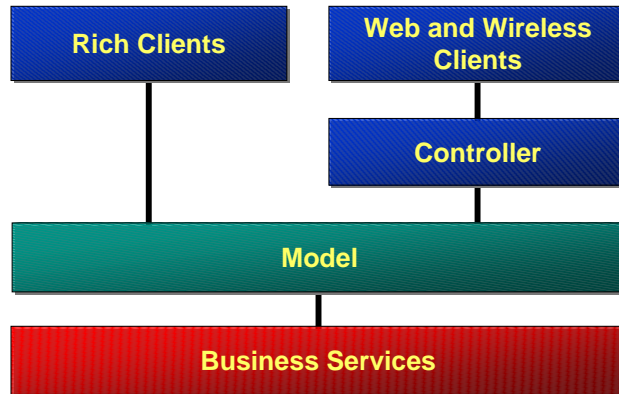
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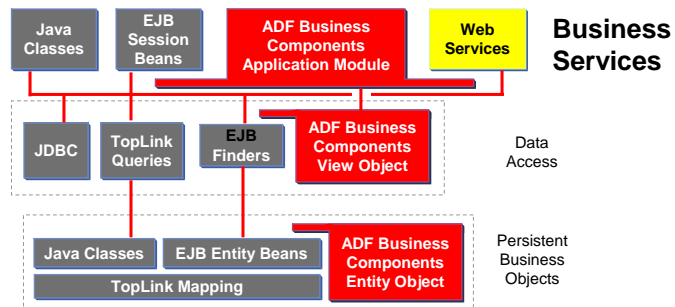
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ADF Architecture Overview



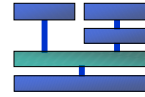
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Business Services Technologies in Detail



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Goals of ADF

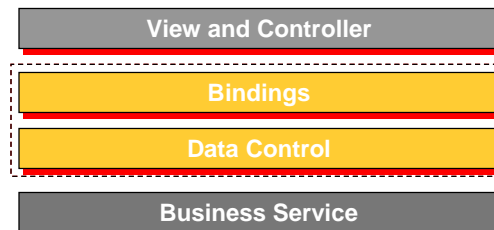


- Provide **Service Oriented Architecture (SOA)**
 - Common design time experience for any business services, any view.
 - Off-the-Shelf EJB's and Web Services as easily integrated as your own business service logic
 - Declarative Client binding for any business service
 - No code required to invoke business service methods, nor to display data (collections) returned by methods.
- Promote to **Industry Standard**
 - JSR-227: Standard Data Binding & Data Access Facility for J2EE

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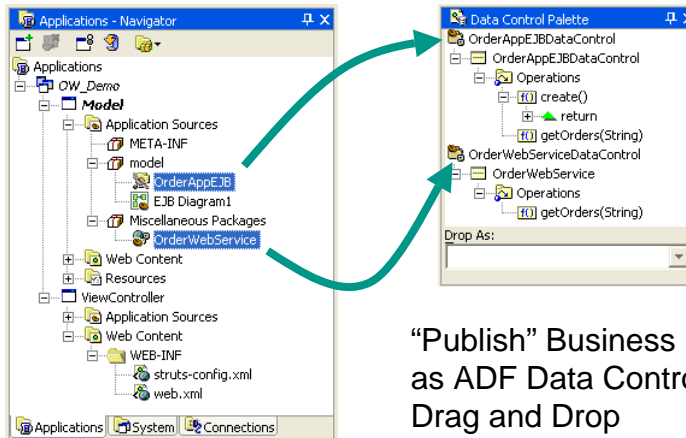
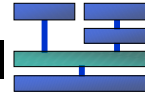
Model Layer Components

- Bindings:
 - Define the interaction between a view or controller component and the Business Service.
- Data control:
 - Defines the data model returned by the Business Service.



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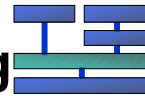
ADF Model – Data Control



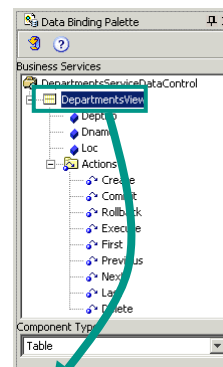
“Publish” Business Service as ADF Data Control through Drag and Drop

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ADF Model – Data Binding



- Use (“Bind”) Data Control Collections, Attributes and Operations in your pages
- Drag and Drop Data binding experience is the same for any business service, any view.



<code>{bindings Deptno label}</code>	<code>{bindings Dname label}</code>	<code>{bindings Loc label}</code>
<code>forEach {bindings.DepartmentsView.rangeSet}</code>		
<code>{Row Deptno}</code>	<code>{Row Dname}</code>	<code>{Row Loc}</code>

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- **Create and deploy data-driven Web Services based on ADF Business Components**

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What is Oracle JHeadstart?

- Proven Development toolkit for rapid J2EE application development
- Guiding Principles:
 - Declarative Development
 - Rapid, Iterative Prototyping
 - Powerful generator as a plug-in into JDeveloper
 - Assembles reusable components, does NOT generate Java!
 - Generates fully functional ADF-based J2EE apps
- Currently restricted to Business Services using ADF Business Components

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Question:

**Does that mean JHeadstart can
not be used in a SOA
architecture?**

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Answer:

Absolutely Not!

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D E M O N S T R A T I O N

Business Flow supported by BPEL and JHeadstart Application

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Summary

- ADF can be used to easily create Java-based Web Services
- ADF Application can easily invoke Web Services, thereby coupling one application with the other.
- **“Identify what is subject to change, and separate it from what will not change”.**
- Instead of having one application invoke the other (through a Web Service) an external controller (such as BPEL can deal with the invocation of Web Services, so that application are more “loosely coupled”.

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Links

- Tutorial with step-by-step instructions for the WebService demos in this presentation:
<http://www.orablogs.com/jheadstart/howtos/HowToWebServicesADF.html>
- JHeadstart Product Website:
<http://www.oracle.com/technology/consulting/9iservices/jheadstart.html>

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