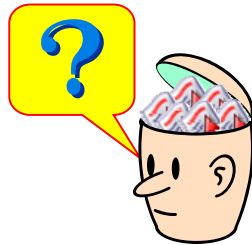


Oracle JDeveloper 10g with ADF Faces and JHeadstart: *Is it Oracle Forms Yet?*



Peter Koletzke
Technical Director &
Principal Instructor



quovera

Survey

- Forms development
 - 1-2 years?
 - 3-9 years?
 - More than 9 years?
 - Designer Forms generation?
- Java development
 - 1-2 years?
 - 3-11 years?
 - More than 11 years?
- JDeveloper
 - 1-3 years?
 - More than 3 years?
 - 10.1.3?



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First Law of Serendipity

In order to discover
anything, you must be
looking for something.

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Second Law of Serendipity

If you wish to make an
improved product,
you must already be
engaged in making an
inferior one.

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Agenda

• JDeveloper and ADF

• JSF and ADF Faces

Slides will be available
on the Quovera and
NYOUG websites

• JHeadstart

• Is it Oracle Forms Yet?

2:45 - The Tie That
Binds: An Introduction
to ADF Bindings

Rumor: There is a good book available about
JDeveloper 10g for Forms and PL/SQL developers



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What is JDeveloper?

- Oracle's Java IDE
 - 3GL code generator and organizer
 - Some 4GL aspects
- Supports all development for J2EE
 - Different styles of deployment
 - E.g., Java application, applet, JSP, servlet, EJB
- Easy development, debugging, deployment
- Lots of wizards that create starting code
- Data access framework: Business Components (BC4J and ADF BC)
- Work in JDeveloper is oriented around ADF

Current production
release: 10.1.3.1

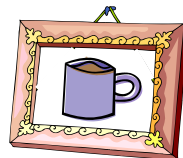


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Oracle Application Development Framework (ADF)

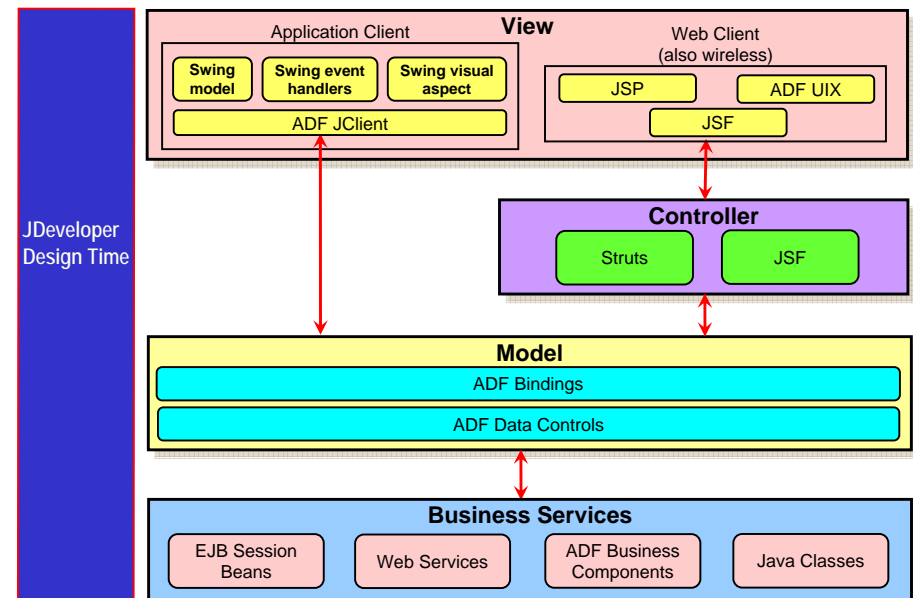
- A meta-framework: a wrapper for other frameworks
 - JSF
 - Struts
 - ADF Business Components, etc.
- Meets the challenges of J2EE development
 - Lots of technology choices
 - No tool to integrate them
 - Database connectivity is difficult (JDBC)
- Available starting in JDeveloper 10g
- Multiple development paths use same code layers
- Based on Model-View-Controller J2EE design pattern



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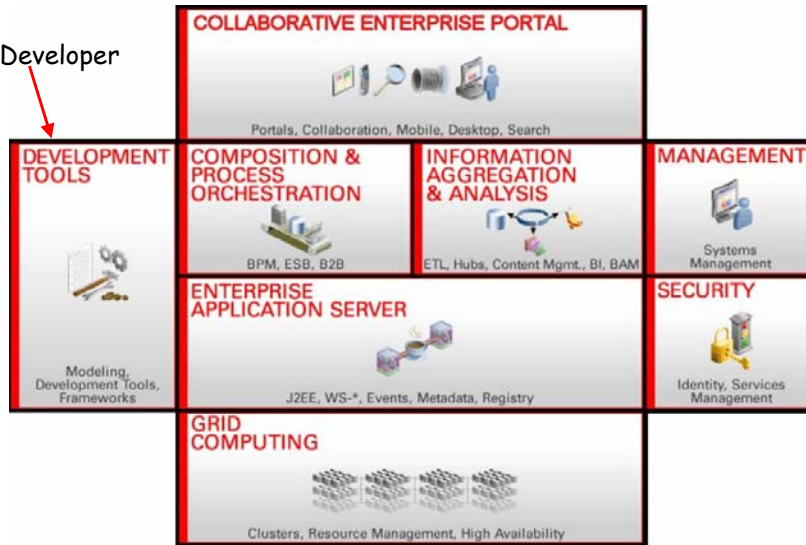
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ADF Architecture



Where Does JDeveloper Fit in Oracle Fusion Middleware?

JDeveloper

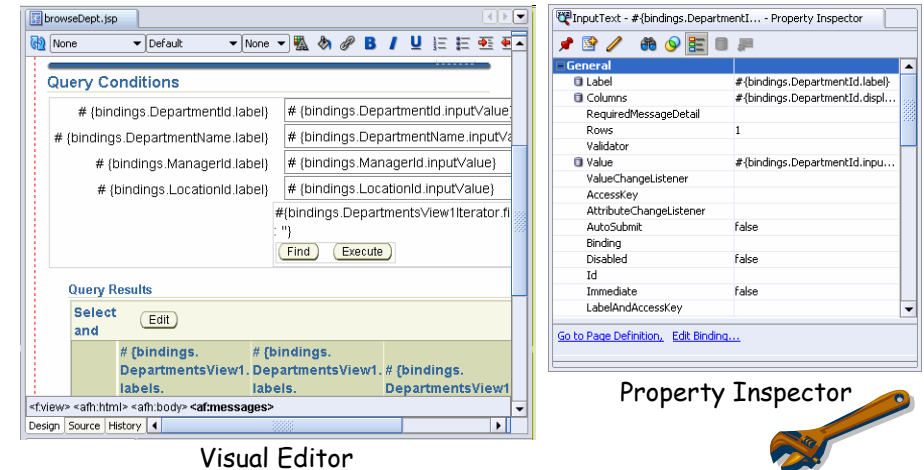


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Development Experience

- Primarily visual and declarative



Visual Editor

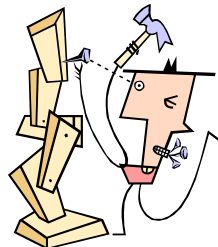
Property Inspector

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Development Process

1. Create application workspace
2. Create Business Services and Model project
3. Create View and Controller project
4. Add Model objects using the BC diagram, wizards, and editors
5. Add View and Controller objects
 - Create navigation diagram then pages AND/OR
 - Create pages then navigation diagram
6. Test and debug



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Agenda

- JDeveloper and ADF
- JSF and ADF Faces
- JHeadstart
- Is it Oracle Forms Yet?

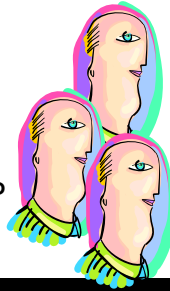


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What is JSF?

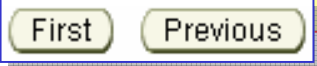
- JavaServer Faces technology
- “New” technology (ratified JCP in 5/2004)
 - Part of the new Java Platform spec (Java EE 5)
 - Offers reference implementation
- Effort to simplify JSP development
 - Component-ize it
 - High-level components provide much functionality
 - Integrate the controller
 - No Struts needed
 - Write less HTML
 - Component handles markup language
- Can embed JSF in a JSP page
 - Reference Implementation only supports JSP
 - Outputs HTML to the browser



JSF Code Snippet

```
<af:panelButtonBar
  binding="#{backing_Deptapp.panelButtonBar1}">
  <af:commandButton
    actionListener="#{bindings.First.invoke}"
    action="First" text="First"
    disabled="#{!bindings.First.enabled}"
    binding="#{backing_Deptapp.commandButton1}"/>
  <af:commandButton
    actionListener="#{bindings.Previous.invoke}"
    action="Previous" text="Previous"
    disabled="#{!bindings.Previous.enabled}"
    binding="#{backing_Deptapp.commandButton2}"/>
</af:panelButtonBar>
```

prefix indicates library



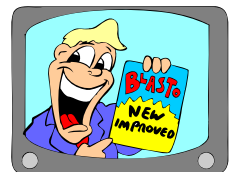
ADF Faces

- Oracle tag libraries
 - Released to MyFaces open source project in Jan. 2006
 - Trinidad project at myfaces.apache.org
 - Available in JDeveloper 10.1.3
 - Over 100 components
- Implements most components available in UIX
 - UIX is used by Oracle E-Business Suite apps
- Uses JSF mechanisms
 - Adds even more functionality to JSF
 - Lots of additional features
- **Important:** Oracle is using ADF Faces to build Fusion applications



ADF Faces Features

- Supports multiple platforms through “render kits”
 - Theoretically, so does native JSF
 - JSP document or page (for HTML clients)
 - Telnet
 - Wireless
- Changeable “skins”
 - Look-and-feel characteristics
 - oracle, minimal, simple, your own
 - Can be changed with one config property
- Solid development support in JDeveloper
- Dynamic images
 - Tab and button images are generated at runtime
 - Text on image is based on properties
 - No maintenance of image files



More ADF Face Features

- Message handling
 - Standard message component
 - Error for a field contains link to problem field
- Rich component set
 - Many have prebuilt JavaScript code
 - Container tags generate HTML layouts
 - Examples later
- Client-side validation, dialog framework, accessibility aware, ADF data binding support



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Featured Feature: PPR

- Partial page rendering (PPR)
 - Only part of page is submitted
 - For example, only table values are refreshed
 - This makes the user experience smoother
 - Available on several components
 - JavaScript effects without JavaScript coding
- AJAX-like
 - Asynchronous JavaScript and XML
 - Industry-standard method
 - Very hot currently

AJAX provides a **cleaner** user interface!



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Some ADF Core Components

* Last Name af:inputText

Department af:selectInputText

af:commandButton

Sales af:outputText

* Job af:selectOneChoice

☒ TIP Fields marked * are required af:panelTip with af:outputText

* Hire Date af:selectInputDate

af:objectMedia

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More ADF Core Components

Home My Profile Employees Reference

Reference Data | Job Types af:menuTabs and af:menuBar with af:commandMenuItems

Currently Unassigned Assigned to this Department

af:menuButtons with af:commandMenuItems

af:selectOrderShuttle

Root > Computer > Hardware > CDROM af:menuPath

AF:teeth

af:tree

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Demo

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Agenda

- JDeveloper and ADF
- JSF and ADF Faces
- JHeadstart
- Is it Oracle Forms Yet?



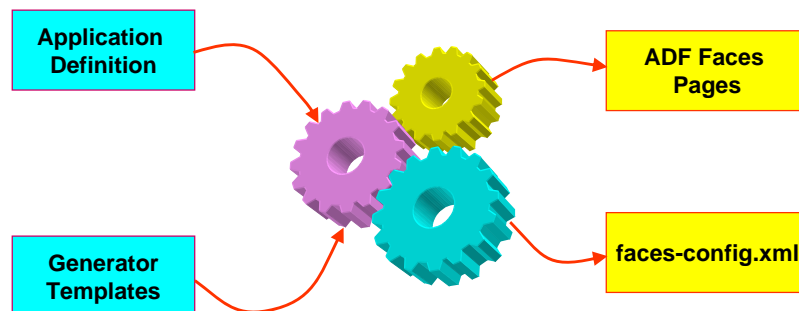
JHeadstart

- Oracle product
 - Developed by Oracle Consulting's Center of Excellence in the Netherlands
 - Google "JHeadstart Product Center"
 - Limited trial version available for download
- Add-in for JDeveloper
 - In sync with version 10.1.3
- Contains JHeadstart Application Generator
 - Generates ADF Faces and JSF code from definitions in the *application definition* file
 - Fully template-driven
 - Modify the generated code using standard JDeveloper techniques
- Contains JHeadstart Designer Generator – migrate Designer definitions

Separate license needed if used for a production application.

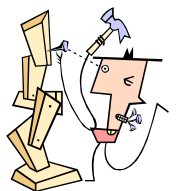


Generator Input and Output



Development Steps

1. Create the Model project using ADF BC
 - Entity objects
 - View objects
 - Application modules
 - Associations (optional)
 - View links (only needed for master-detail)
 - Control hints
 - Declarative validation rules
2. Enable JHeadstart on the ViewController project
 - Runs the JHeadstart Enable Project Wizard



Development Steps (continued)

3. Create application definition file

- Runs the Create a New JHeadstart Application Definition Wizard
- Creates default groups in the application definition file

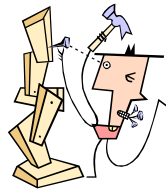
4. Refine the application definition file

5. Run the JAG

6. Repeat 4 and 5 until satisfied

7. Turn off generator and make manual changes to the code

Need to switch on Expert mode to see generator switches.



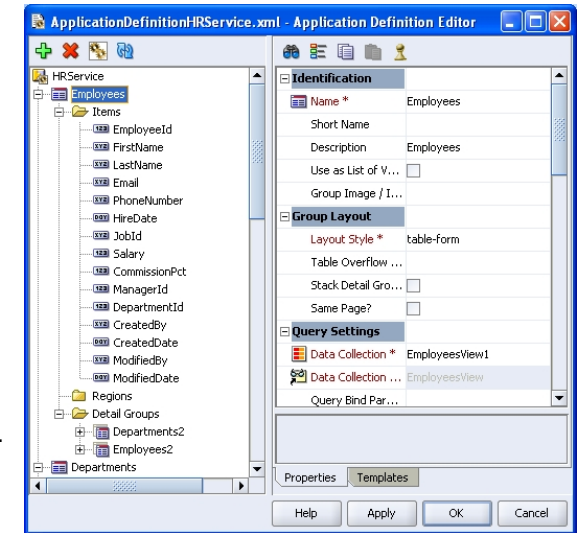
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Demo

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Application Definition File

- Repository for all JHS settings
- Editor appears in a separate window (non-modal)
 - Select Edit JHeadstart Definition from right-click menu on any node in ViewController project
- The editor manipulates an XML file used by the JAG



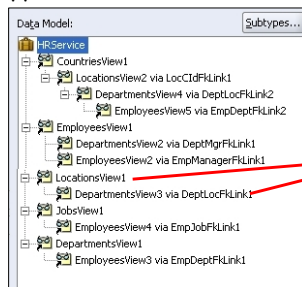
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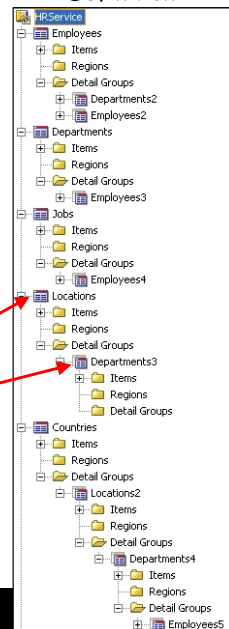
Default Definition

- Generated by New App Def Wizard
- One group for each top-level app module view object instance
- Detail groups for nested view object instances
- Create other definitions using the "+" icon in the toolbar

Application Module Data Model



JHS Application Definition

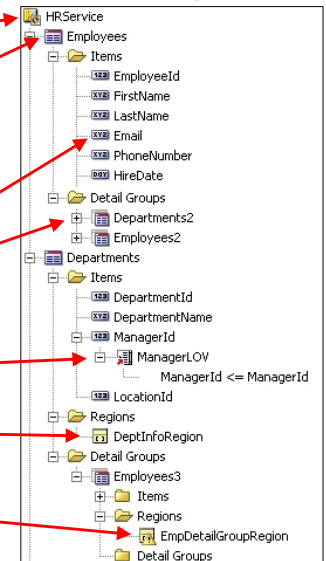


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Some Application Definition Objects

- Service
 - Overall settings
- Group
 - One for each view object the user interacts with
 - Creates a tab page
- Item
- Detail group
- LOV
- Item region
 - Layout bands
- Detail group region
 - Areas in the detail group

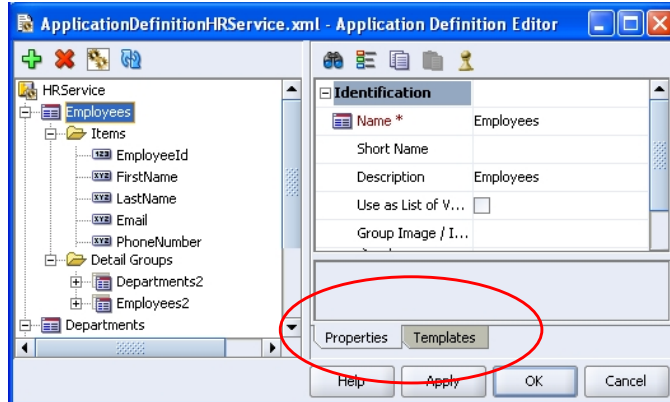


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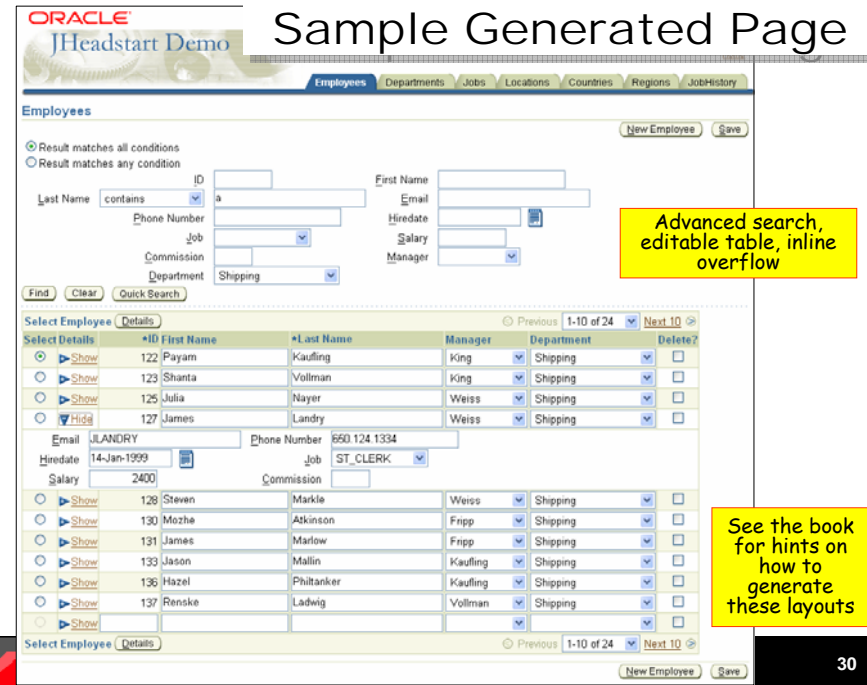
Properties and Templates

- Each application definition node has:
 - Properties tab – for property settings
 - Templates tab – to set templates for that level



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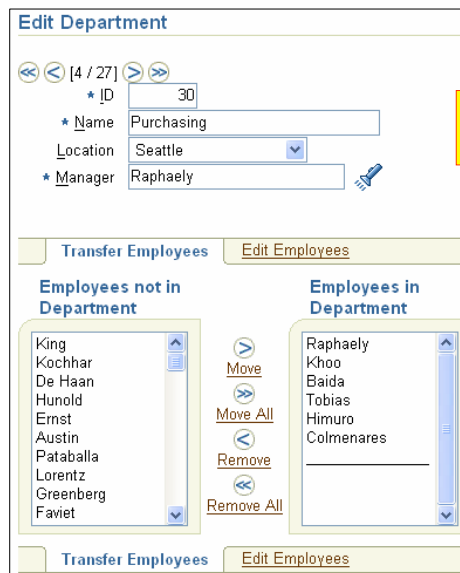


Advanced search, editable table, inline overflow

See the book for hints on how to generate these layouts

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Sample Generated Page (snippet)

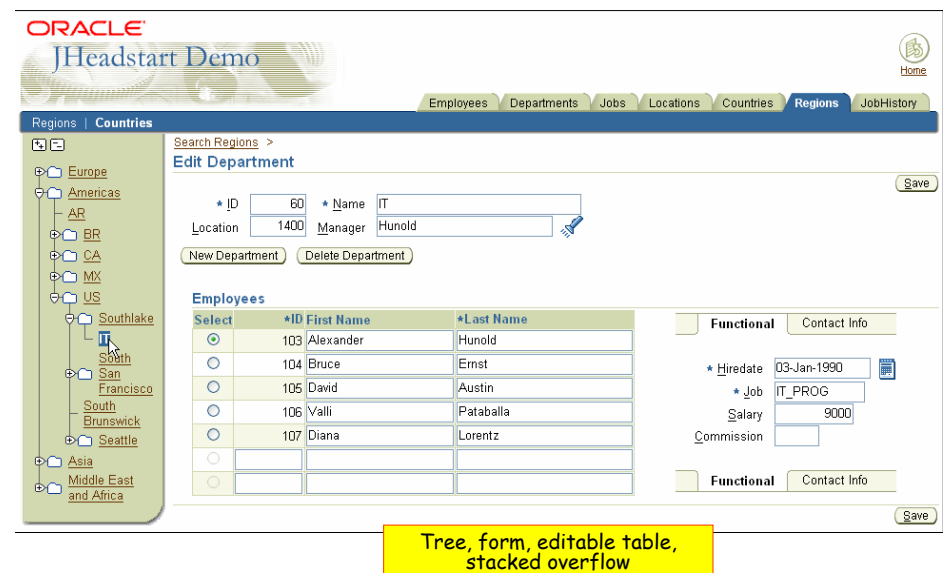


List of values, stacked children, shuttle

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Sample Generated Page



Tree, form, editable table, stacked overflow

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Agenda

- JDeveloper and ADF
- JSF and ADF Faces
- JHeadstart
- Is it Oracle Forms Yet?



Short Answer

No!
but...



It's a Close Second



- RAD for standard operations
 - A tie
- RAD for complex functions
 - Forms slightly ahead of JDeveloper without JHeadstart
 - JDeveloper with JHeadstart is way ahead of Forms
- Development complexity
 - Forms developers face a learning curve with JDeveloper
 - With JHeadstart the learning curve is much less
- Ease of extensions
 - ADF Faces - 3GL is always present
 - Forms needs Java (PJC's)
- Highly interactive UI – Forms
 - Apples and oranges (light client vs. heavy client)
 - ADF Faces and JHeadstart generated code is very interactive

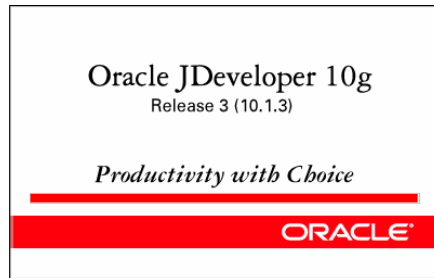
Other Comparisons

- Prebuilt components – ADF Faces
 - Forms has 22 (8 of which are drawing shapes)
 - ADF Faces has over 100 (some are not visual)
- Development experience
 - Forms = declarative and visual with some PL/SQL
 - ADF Faces = declarative and visual with some Java (and Expression Language)
 - JHeadstart = declarative only
- Future
 - Forms' future is solid – support to 2012
 - Functionally stable, no new features
 - Still part of Oracle Applications (E-Business Suite)
 - ADF Faces – very new technology
 - Nothing in J2EE lasts very long
 - J2EE is Oracle's focus
 - JHeadstart
 - Has rapidly growing following
 - Makes sense for Forms developers



It is a Suggested Path

- JDeveloper is a J2EE tool
 - Supports any style of J2EE code
 - Less need to think about “plumbing”
- Before ADF Faces, little guidance for suggested path
 - “Productivity with Choice”
 - The myth for Forms developers
 - How to choose?



What Do You Need to Start?

- Language skills needed
 - Java is omnipresent
 - But only at a scripting level
 - Still need a Java architect on the project
 - XML is a handy skill
 - If you know “elements” and “attributes,” that’s enough
 - HTML is not really used in ADF Faces
 - Helps to know what an HTML table is
- ADF development method
 - ADF Business Components



Can ADF Faces Help You?

- It can help shops that have J2EE experts
 - J2EE experts will be more productive
 - They need to learn the ADF process
- It can also help shops who have “traditional” non-J2EE Oracle developers
 - Forms and PL/SQL developers can be productive with the declarative tools
 - With training, they can write Java extensions
 - Much of the complexity is hidden
 - They need a J2EE expert to guide them and code the internal, complex stuff



Summary

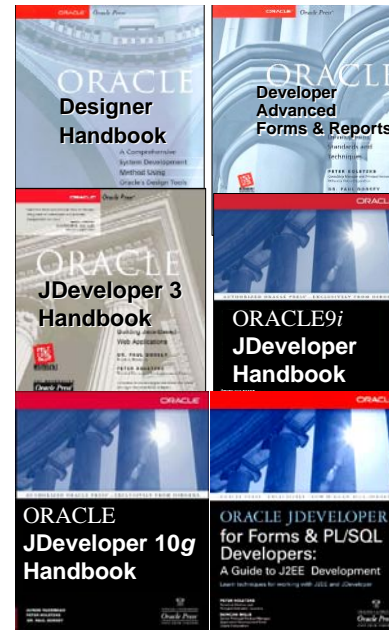
- ADF is a framework in JDeveloper that helps development productivity
- You can create J2EE web applications with JSF and ADF Faces
- JHeadstart provides lots of prebuilt, working code you can use as a starting point
- JDeveloper development is close to Forms development
 - Rivals Forms’ productivity
 - Extremely rich component set
 - Support for declarative and visual programming
 - Requires a bit of ramp up time
 - It’s J2EE-compliant and you still need a J2EE architect



Law of Probable Dispersal

Whatever it is that hits the fan will not be evenly distributed.

— *Anonymous*



- Please fill out the evals
- Books co-authored with Dr. Paul Dorsey, Avrom Roy-Faderman, & Duncan Mills
- Personal web site:
http://ourworld.compuserve.com/homepages/Peter_Koletzke



<http://www.quovera.com>

- Founded in 1995 as Millennia Vision Corp.
- Profitable for 7+ years without outside funding
- Consultants each have 10+ years industry experience
- Strong High-Tech industry background
- 200+ clients/300+ projects
- JDeveloper Partner
- More technical white papers and presentations on the web site