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### Rich Web UI made simple – an ADF Faces Overview

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Product Manager – Oracle JDeveloper and Oracle ADF

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## Agenda

- Comparison: New vs. Old
- JDeveloper Provides
- JSF Overview
- ADF Faces Rich Client Components
  - Layout Components
  - Common Components
  - Operation Components
  - DVT Components

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## Your Users are Using These at Home:

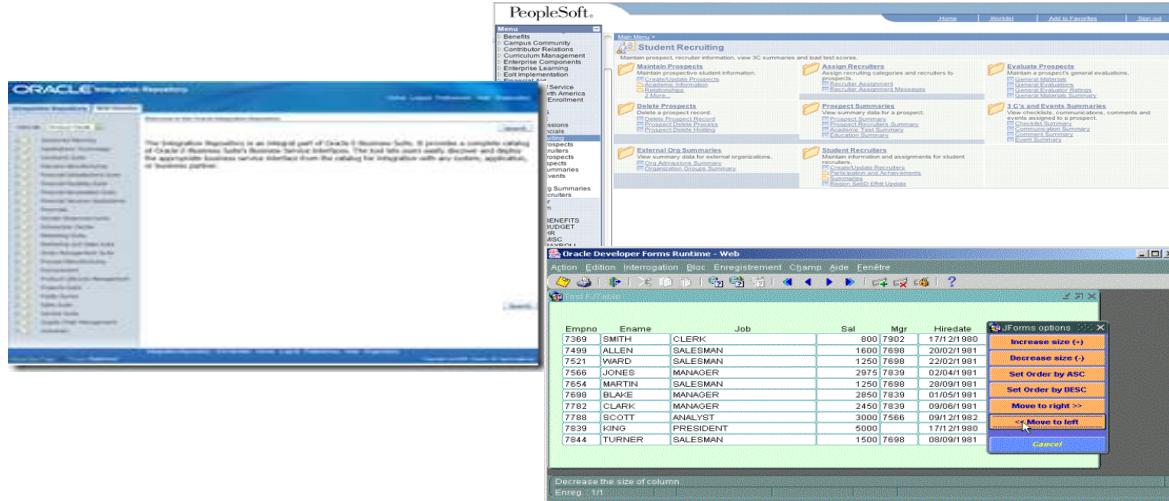
The image is a composite of four screenshots arranged in a grid:

- Yahoo! Mail:** Shows the inbox with 5865 messages. A red box highlights the 'Check Mail' button.
- Google Maps:** A map of Redwood City, CA, showing a route from '1825 Roosevelt Ave' to '8000 Googleplex Way'. It includes a street view image and a 'Get directions' button.
- Google Analytics Settings:** The 'Analytics Settings' page with sections for 'Dashboard', 'Visitors', 'Traffic Sources', 'Content', and 'Goals'.
- Oracle Dashboard:** A line chart titled 'Visits' showing data from July 13 to July 20, 2009. A callout box highlights a data point for 'Tuesday, July 14, 2009 Visits 37'.

At the bottom of the image, there is a red horizontal bar with the text 'ORACLE' on the right side.

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# How Do Your Applications Look?



## What's The Difference?

- Better Looking UI
- Better User Interaction
- Better Feedback
- Better Data Visualization
- Better Process Flow

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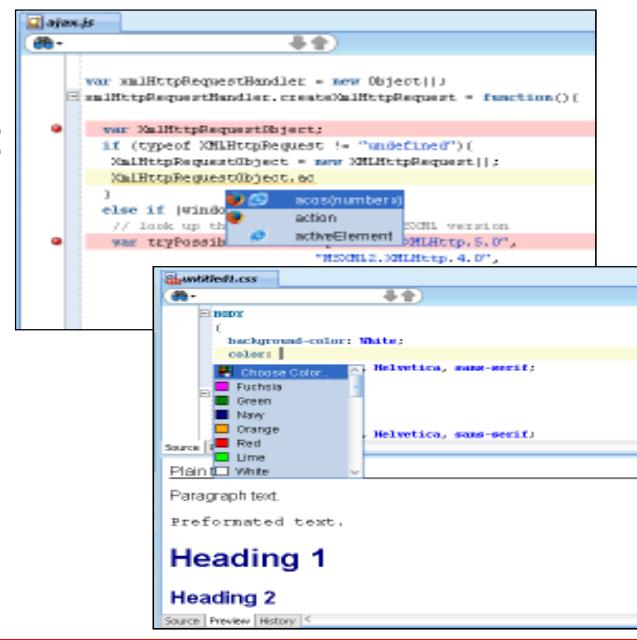
## How Does It Work?

- AJAX
  - asynchronous JavaScript and XML
  - DOM
  - XHTML
  - CSS
  - XML/XSLT
  - XMLHttpRequest
  - JavaScript
- Maybe some Flash

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## We Have The Tools

- Oracle JDeveloper includes:
  - Visual HTML layout editor
  - JavaScript editor
    - Code insight
    - Refactoring
  - JavaScript Debugger
  - CSS editor
    - Preview tab
  - HTTP Monitor



## But The Challenge

- Thousands of developers
- Most don't know Ajax technologies
- Most come from 4GL background
- Expecting a visual and declarative approach
- Don't have time to learn all the new Ajax technologies
- Need to focus on their specific application needs

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**THERE MUST BE A SIMPLER  
WAY...**



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# **A Simpler Approach**

## **JSF and ADF Faces**

## **Components**



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## JSF In 60 Seconds

- Simplifying Web Development
  - Server side UI generation
  - **Component based** not mark-up
  - Automatic event and state handling
  - Diverse client base not just HTML
  - Designed with tooling in mind
  - Applicable to wide spectrum of programmer types
- A Java EE standard

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## ADF Faces Rich Client Components

- Over 150 components
- Ajax enabled
- Pluggable look and feel
- Accessibility & internationalization
- The usual components plus:
  - Charts, gantt, geo-map, pivot, calendars, coverflow
- Built in advanced functionality:
  - Drag and drop framework
  - Dialog and pop-up framework
  - “Active Data” - Dashboards / push updates (comet)
  - Templating and declarative components



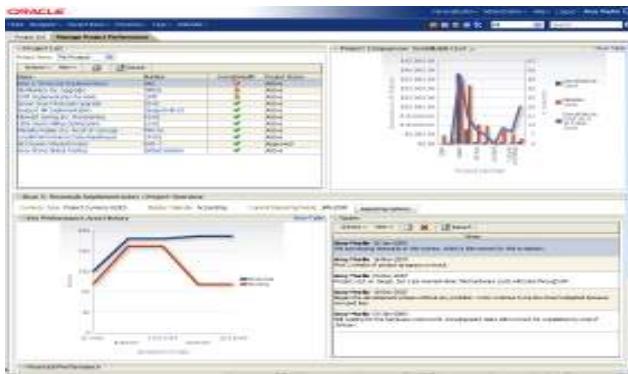
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# Fusion Applications HCM

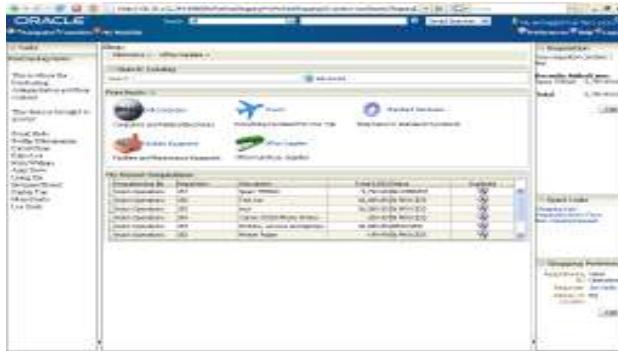


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# Fusion Applications Projects



## Fusion Applications Procurement



# Oracle WebCenter Spaces



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# MICROS



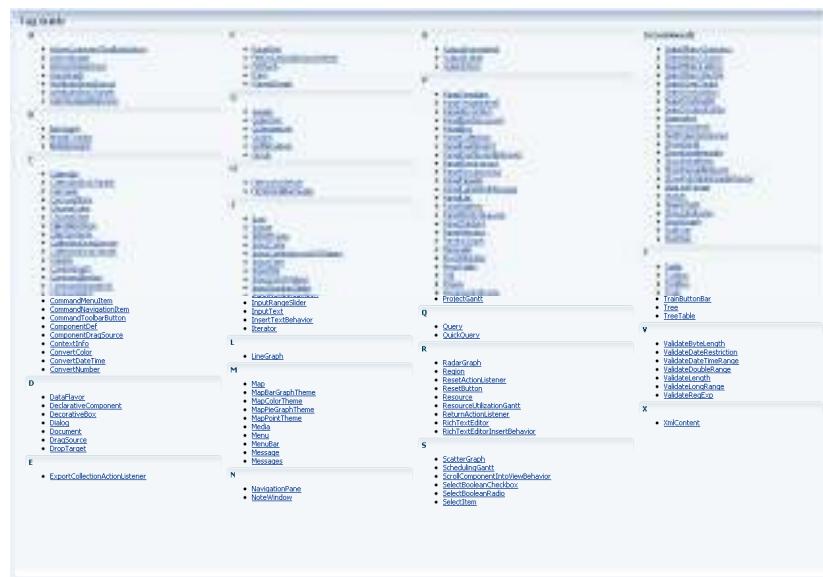
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# Cuyahoga County



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# Over 150 Ajax Enabled Components



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## More Than Components – A Framework

- Dialog and popup windows
- Drag-and-drop
- Navigation menu
- Partial page rendering
- Active data framework – ajax communication
- Advanced data streaming – push communication
- Complete JavaScript API
- Templating
- Skinning
- Accessibility

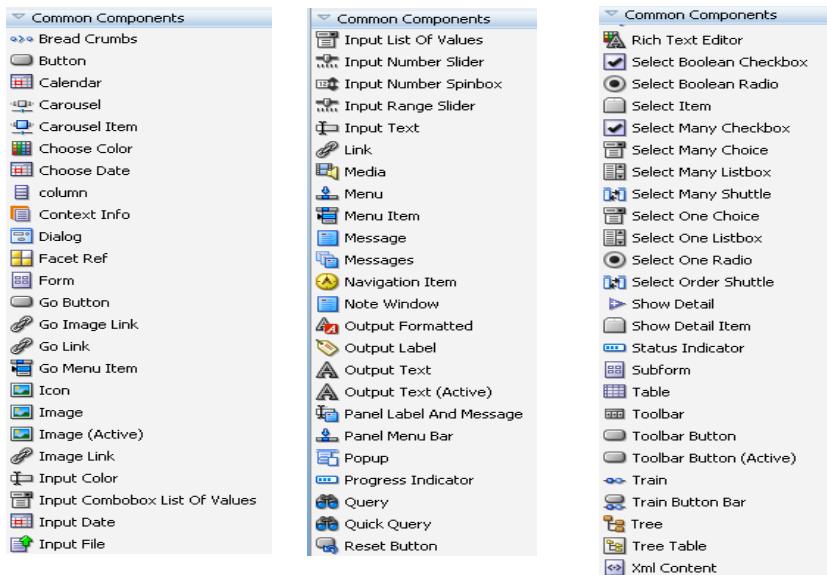
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## Layout Components

- Arrange your page using areas
- Change page layout at runtime
  - Splitter
  - Accordion
  - Show detail
- Advanced layouts
  - Tabbed
  - Dashboards
  - Borders



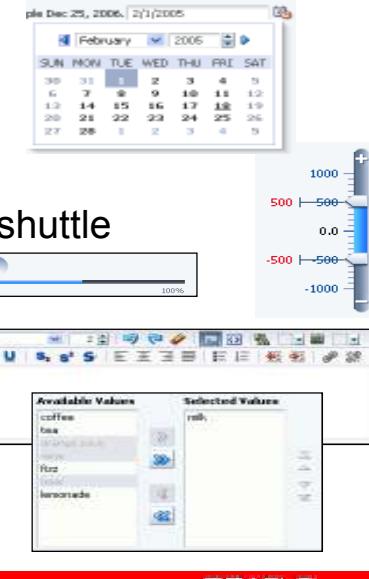
# Common Components



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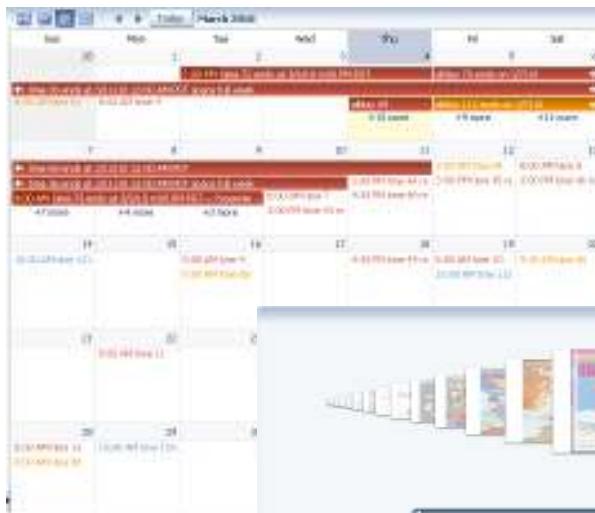
## Common Components

- Input/Output components
  - Text items, check boxes, radio buttons, date
- Selection components
  - Single select, multiple select, combo box, LOV, shuttle
- Tables and Trees
- Navigation components
- Others
  - Progress bar
  - bread crumbs ...



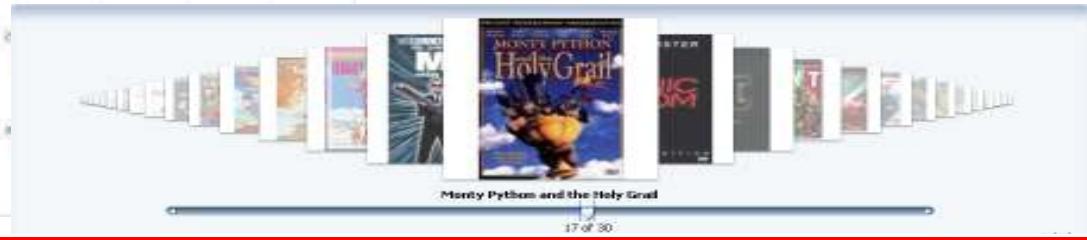
## Some More Advanced Components

Calendar



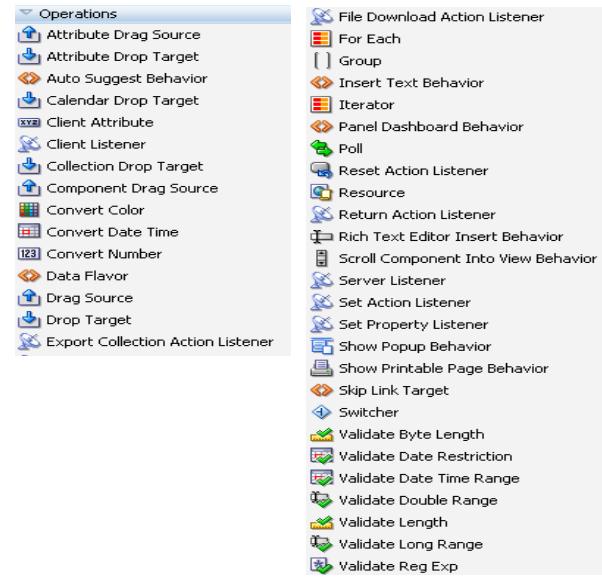
Query

Carousel



## Operation Components

- Eliminate JavaScript Coding:
- Drag and drop
- Autosuggest
- Pop up
- Poll
- Validators
- Listeners
- Convertors
- Export
- Print



# ADF Data Visualization Components

## Overview

- Rich interactive Java Server Faces components
- Significant graphical and tabular capabilities for analyzing data
- Data Visualization components in JDeveloper 11g:
  - Graph
  - Gauge
  - Geographic Map
  - Pivot Table
  - Gantt Chart
  - Hierarchy Viewer
  - Thematic Map

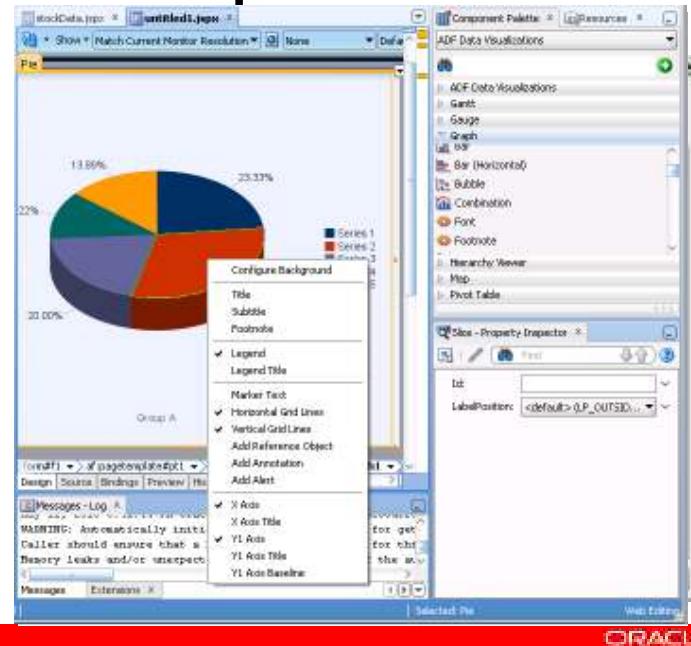


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# ADF Data Visualization Components

## Common Features

- Declarative development using simplified JSF tags
- Design time creation using:
  - Data Control Palette
  - JSF Visual Editor
  - Property Inspector
  - Component Palette
- Live data preview at design time
- Data Binding access to any rowset or tree data control
- Automatic choice of best rendering technology

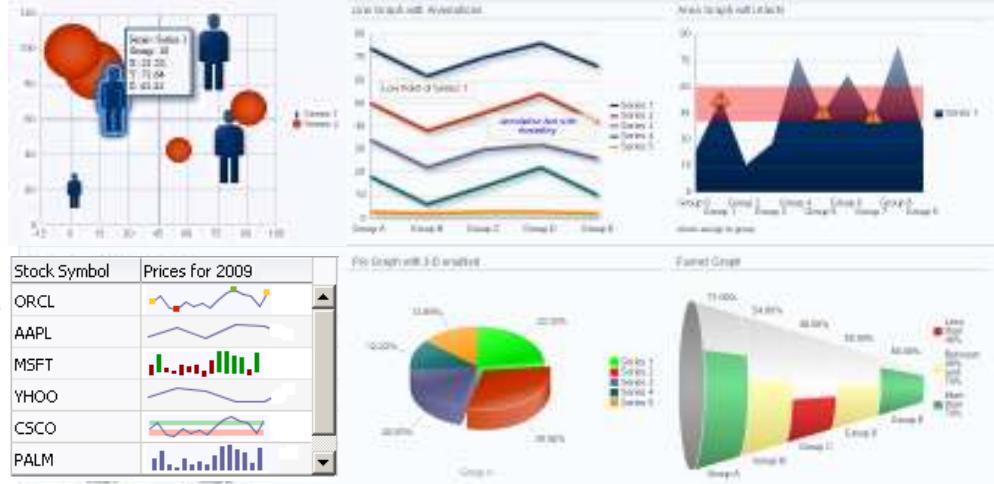


## ADF Data Visualization Graph

More than 50 types including pie, bar, line, bubble, funnel, and stock graphs

- **Interactivity**

- Active Data Enabled
- Animation
- Selection
- Data Highlighting
- Dynamic Reference Objects
- Interactive Pie Slices
- Master-Detail
- Scrollable Legend
- Time Selector
- Zoom and Scroll



- **Sparkcharts**

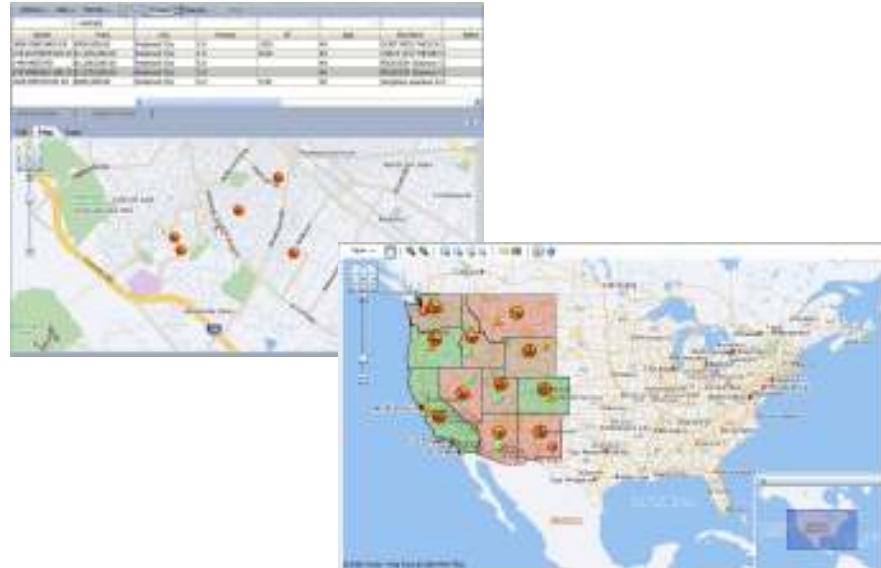
## ADF Data Visualization Gauge

- Quickly track key performance indicators
- Available Types:
  - Dial
  - Status Meter
  - Vertical Status Meter
  - LED
    - Arrow, Bulb, Rectangle, Triangle
- Animation and Interactivity
- Custom Graphics Support



## ADF Data Visualization Geographic Map

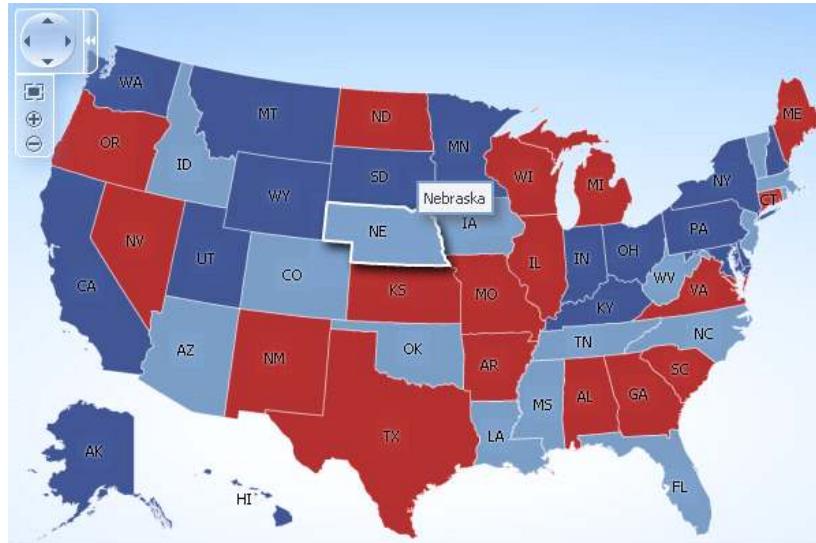
- Functionality of Oracle Spatial within ADF
- View business data on a map
- Format by:
  - Point
  - Color
  - Pie
  - Bar
- Active data support



## ADF Data Visualization Thematic Map

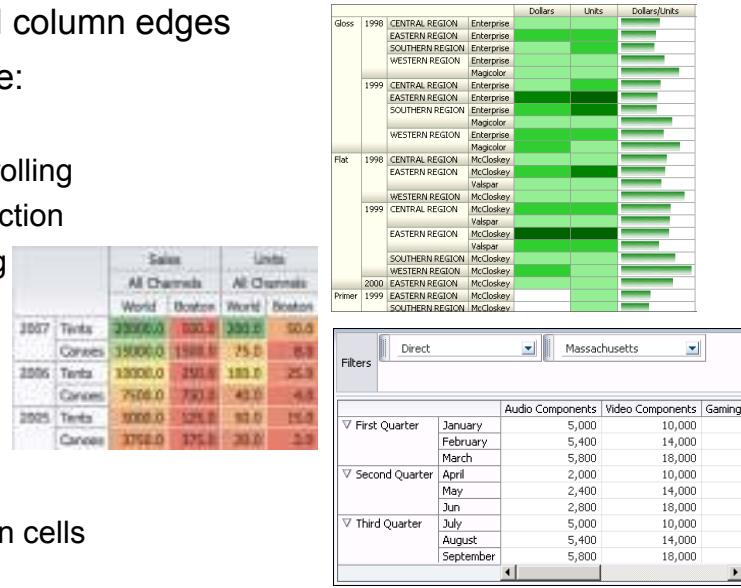
### Features:

- Basemaps
- Custom regions
- Animation
- Drilling
- Selection
- Markers
- Formatting:
  - Colors
  - Gradients
  - Patterns



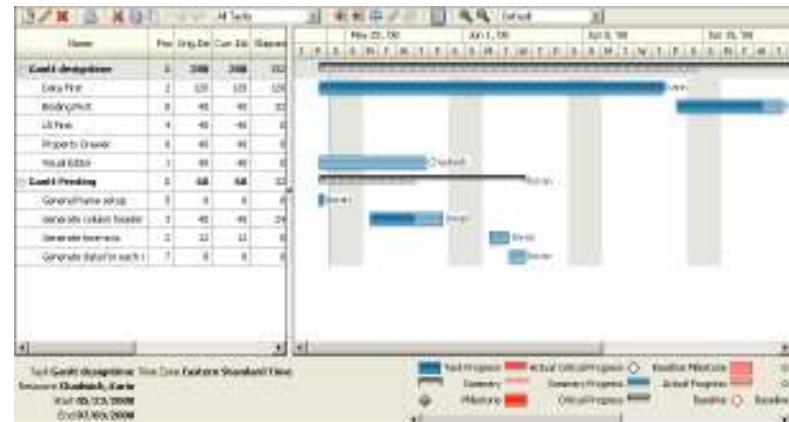
## ADF Data Visualization Pivot Table

- Multiple layers on row and column edges
- Supported features include:
  - Drag and drop pivoting
  - Horizontal and vertical scrolling
  - Cell, row and column selection
  - Header and cell formatting
  - Automatic totals/subtotals
  - Data filtering
  - Drilling
  - Sorting
  - Cell editing
  - Stamping, e.g. data bars in cells
- Pivot Filter Bar



## ADF Data Visualization Gantt Chart

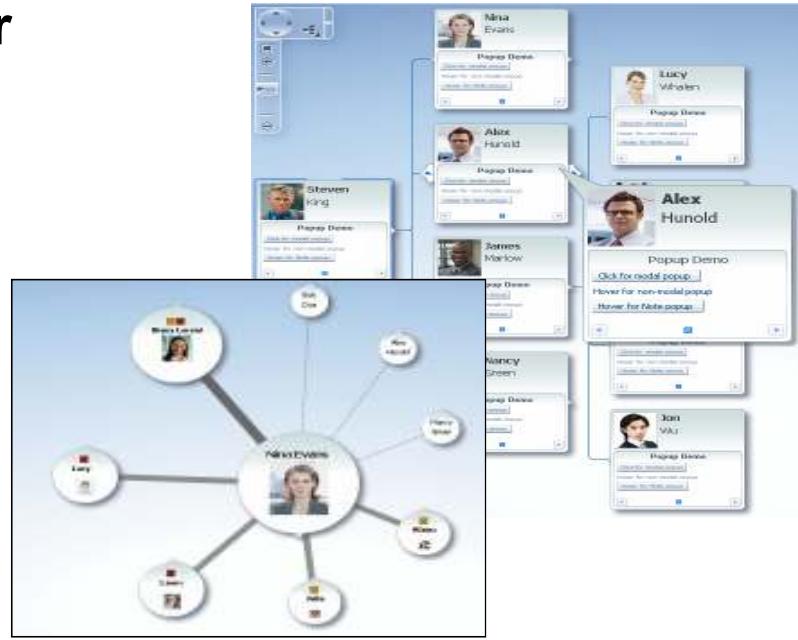
- Track tasks and resources over time for project planning
- Project Gantt (project management)
- Scheduling Gantt (resource management)
- Resource Utilization Gantt (resource utilization)



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## Hierarchy Viewer

- View hierarchical data
- Often used for org charts
- Features:
  - Multiple PanelCards for details
  - Multiple layouts
  - Progressive disclosure of details
  - Expand/collapse nodes
  - Rendering simple ADF components inside the nodes
  - Search



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## ADF Faces and DVT Demo

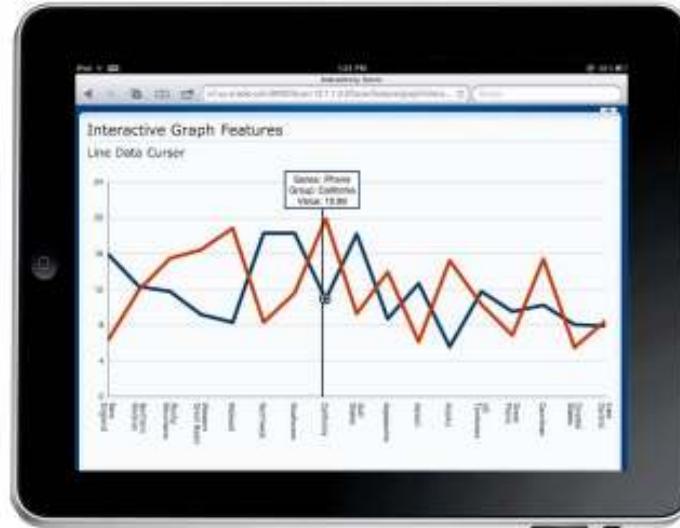
- Component gallery and feature demos for ADF Faces and DVT features
- View page source directly from the demo
- Available to download and deploy, complete with source code
- Find the [demo and instructions](#) on OTN JDeveloper site under Sample Applications



## ADF Data Visualizations

### Support for Mobile Platforms

- Touch and iOS support
  - HTML5 rendering
  - Interactivity and touch support for mobile devices



# ADF Faces Framework Capabilities



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## Declarative Partial Page Rendering (PPR)

Partial Page Rendering:

- Enables redrawing only a portion of a page
- Can be enabled declaratively or programmatically

Triggering  
component:

```
id="zipcode"  
autosubmit="true"
```



Target components:  
partialTriggers="zipcode"

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## JavaScript API

- Interact with ADF Faces components from client side JavaScript
- Allows you to have a client representation of the component
- Catch events and react on the client side
- Invoke server side events from client side JavaScript code
- As a rule – try to minimize the usage of this feature

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## Templates

- Reusable ADF Faces page that contains place holders for custom page content
- Templates are interpreted at runtime
- Authors can change the template for an existing application without opening the application itself
- Templates can have their own ADF binding file
- Templates may accept parameters for passing information from the inheriting page to the template

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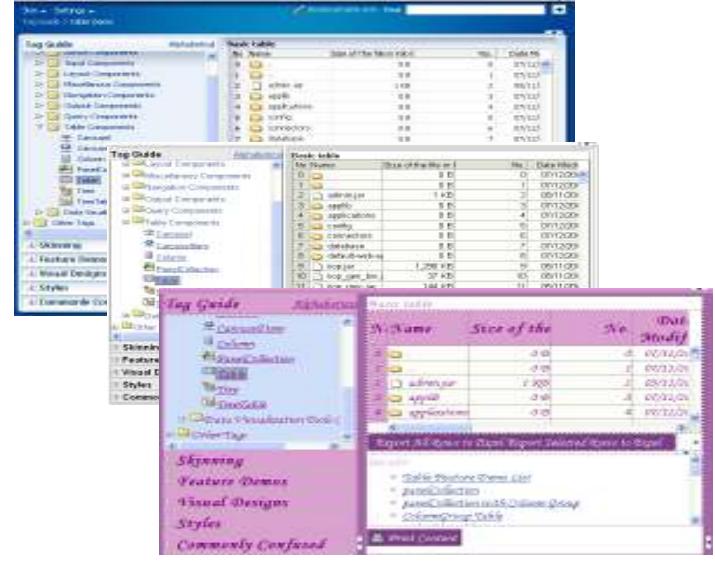
## Declarative Components

- Construct composite components from other components
- Can customize behavior using attributes, methods and facets
- Package components for reuse in other applications

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## Skinning – Customize Look and Feel

- Skins control the standard look and feel of the components
- Defined using CSS
- Control fonts, colors and images
- Extend an existing skin and override specific keys
- Skin selection can be changed at runtime



# Demonstration

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- Arranging a Page with Layout Components
- Displaying Data with Common Components
- Framework Capabilities: Adding Client Functionality with Operation Components
- Displaying Data with DVT Components



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## Conclusion

- Oracle ADF Faces – a Simpler Way to RIA
  - Rich component set
  - Ajax built-in
  - Data visualization
  - Capable underlying framework
  - Easy to develop with



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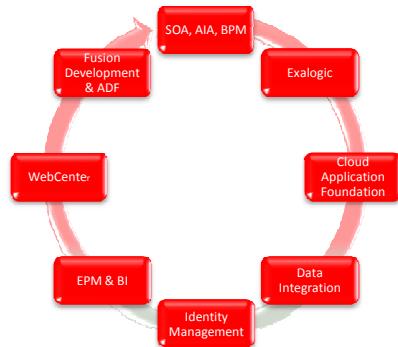


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## Related Oracle Press Books



- Quick Start Guide to Oracle Fusion Development
- Oracle JDeveloper 11g Handbook
- Oracle Fusion Developer Guide



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