

You CAN Judge a Book by Its Cover: Modernize Your User Interface with Mobile Design Principles

Peter Koletzke

Technical Director &
Principal Instructor



ORACLE
ACE Director



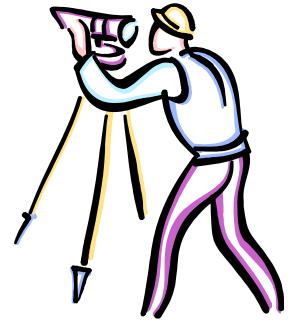
Me

- 34 yrs. database industry
- 30 yrs. consulting in Oracle arena
 - Since Oracle 5.1C, SQL*Forms 2.3
- 38 yrs. as trainer/presenter
- User groups
 - 350+ presentations, 12 awards
 - 7+ yrs. total on boards of directors
 - IOUG(-A), NYOUG, UTOUG
- Oracle ACE Director
 - Since program inception in Aug. 2005
- Oracle Certified Master
 - Since program inception in Dec. 2001
- 8 Oracle Press books coauthored
 - 6262 pages total



You

- Job responsibilities?
 - DBA, developer, graphics designer
- Development tools?
 - APEX
 - Developer Forms/Reports
 - ADF and Java
 - JavaScript tools
 - MAF
 - PL/SQL and SQL



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Agenda

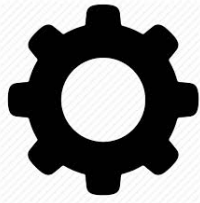
- Why is application design different now?
- App design principles and standards
- Examples and other resources

Slides will be
available on the
NoCOUG website.



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Quiz



HOW DID WE GET HERE?

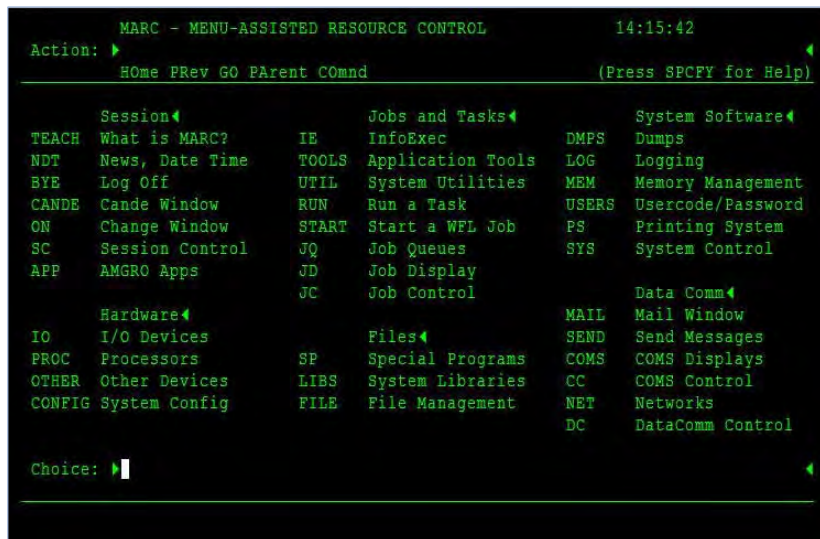


??

In the Beginning Was...

- The “dumb” terminal
- Character mode
- PF and Fn keys!
- Training!

IAF to SQL*Forms
2.0 to Oracle
Developer Forms 6

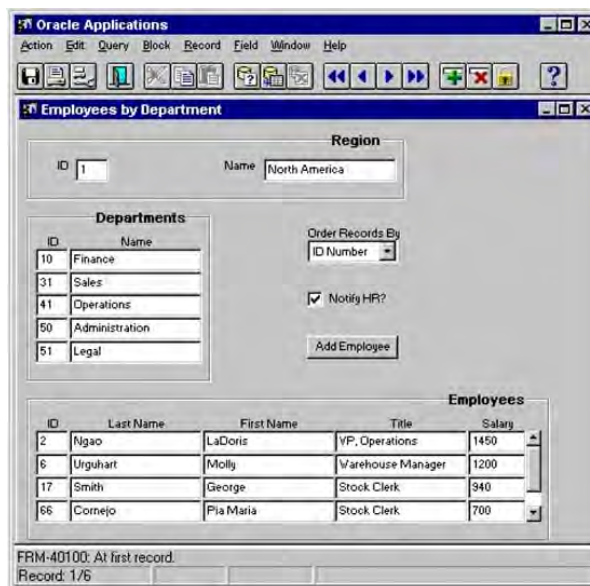


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And Oracle Created ...

- ...tools for client/server applications
- Graphics!
- Mouse!

SQL*Forms 4.0 to
Oracle Developer
Forms 6.0

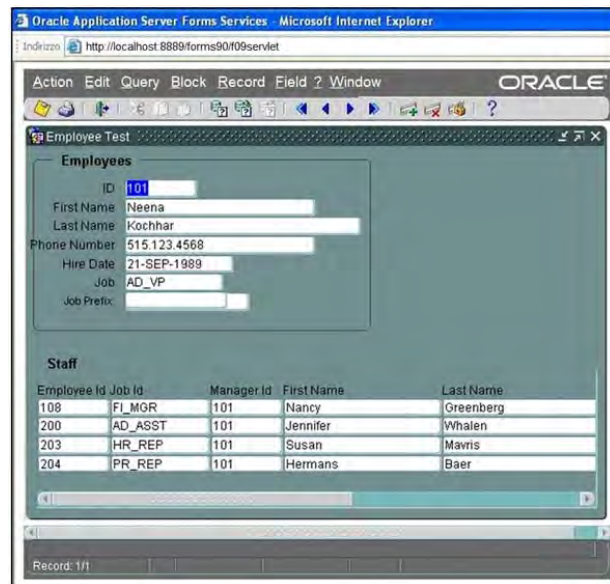


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Client/Server Begat The Year of the Internet...

- ...Java runs Forms within the web browser
- Familiar interface!
- Java install headaches replace Forms install headaches!

Oracle Forms 6i to
Oracle Forms 12c

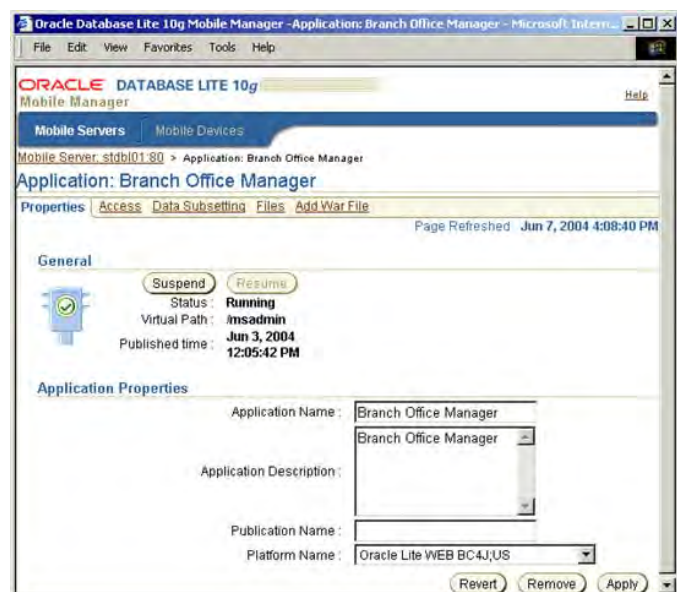


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TYoTI Begat the Next Year of the Internet...

- ... lightweight web apps
- Browser only!
- HTML rules!

Oracle UIX

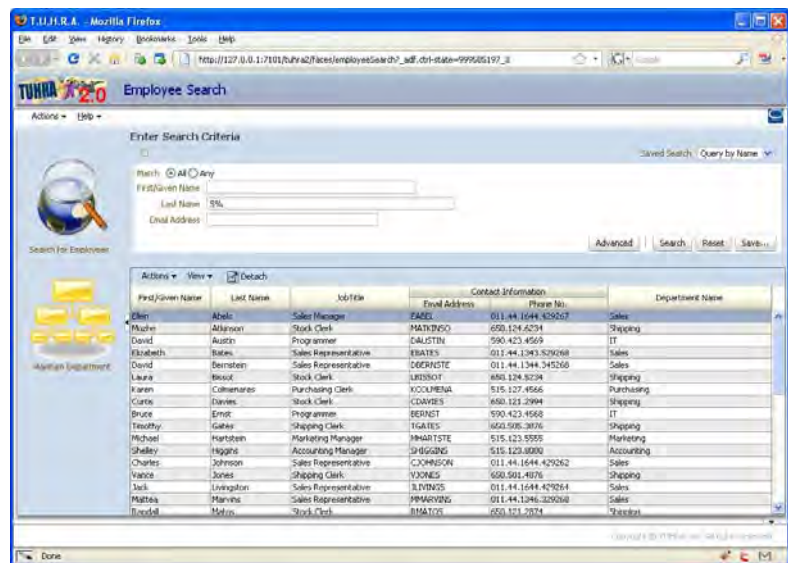


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TNYoTI Begat Another Year of the Internet...

- More web apps
- Interactive Forms-like components!
- Single page!

Oracle ADF Faces
10g to 12c

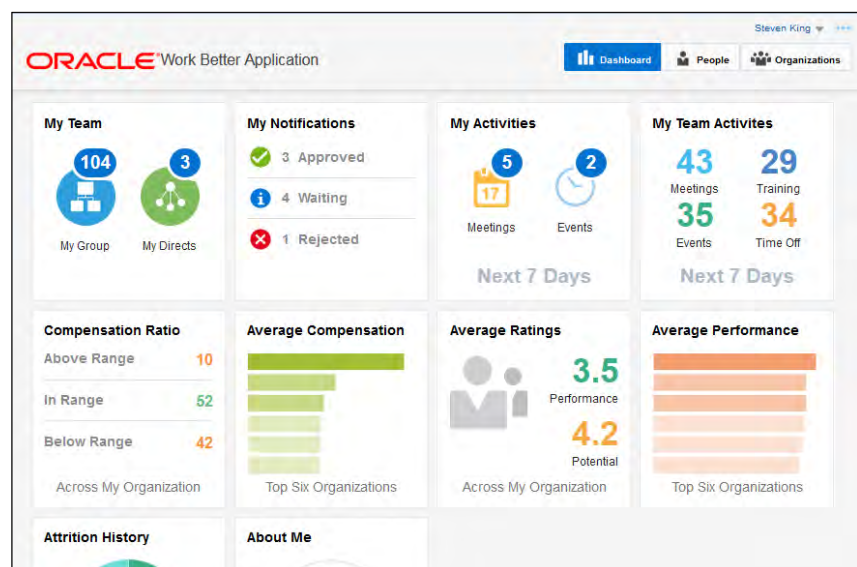


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Today

- Mobile-oriented
- Tap/swipe
- "Intuitive!"

Oracle ADF,
Oracle MAF,
Oracle JET,
Oracle MAX



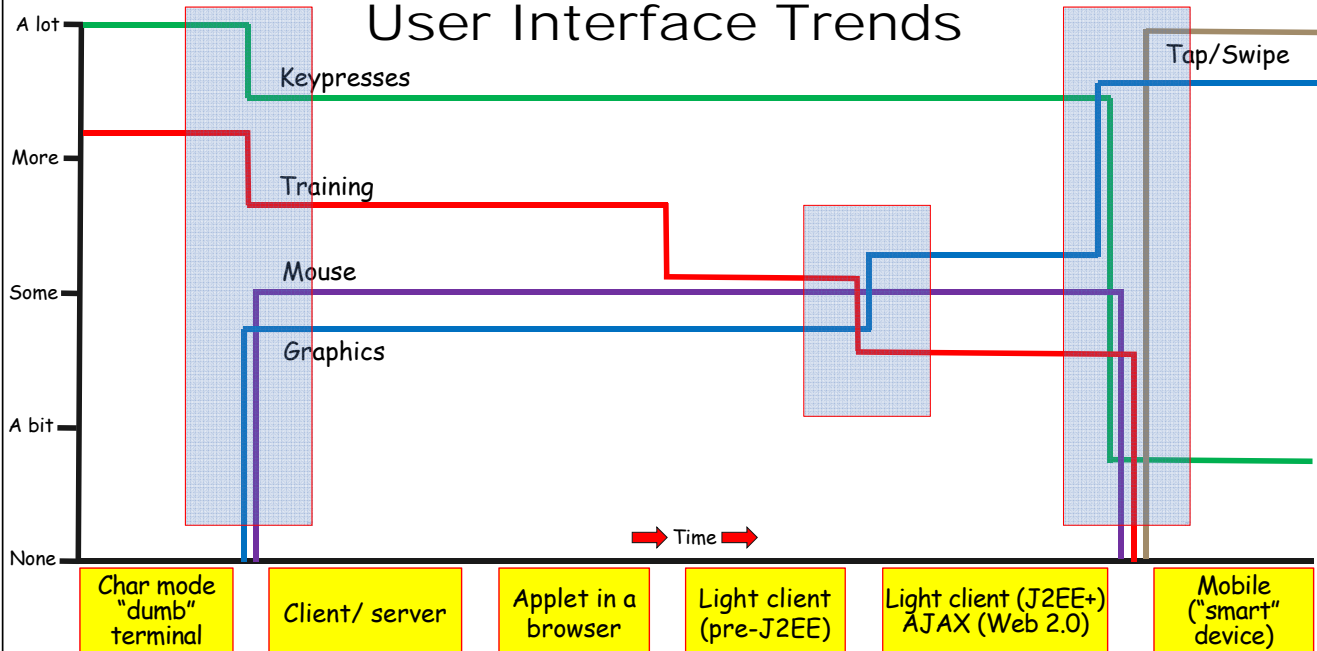
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Comparing UI Devices

Display Paradigm	Graphics	Data Input	User Training	Display Software
Character mode "dumb" terminal	N	Keyboard	None(?)	Terminal software and/or host O/S
Client/server	Y	Keyboard, mouse	Some	Special runtime and app files
Java applet in a browser	Y	Keyboard, mouse	Some	Web browser, Java
Light client (not J2EE)	Y	Keyboard, mouse	Some	Web browser
Light client (Java EE) with AJAX (Web 2.0)	Y	Keyboard, mouse	Less	Web browser
Mobile ("smart"phone, tablet, e-reader)	Y	Key, tap	None(?)	Mobile O/S (Android, iOS, Win10 tablet)

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User Interface Trends

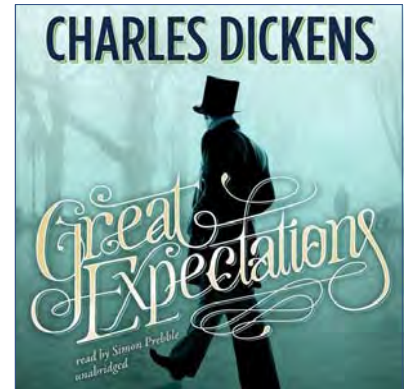


No scale

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Today's Computing Playing Field

- The number of mobile devices has exceeded the world's population
- Mobile computing is here to stay
- Users have **Great Expectations**
 - Less (or no) tolerance for training
 - Short attention span
 - Computing while walking through the parking lot
- This impacts application UI design



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Foundation of Modern UI Design

- Business applications need to comply with mobile “standards”
 - Even if they do not support mobile
- Mobile device user interfaces set the bar
 - Intuitive
 - Three-second user acceptance time
 - Touch interface – tap/swipe
 - Mobile device features: camera, GPS, texting
 - Short tasks
 - Orientation changes



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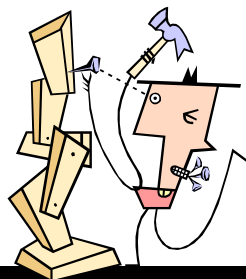
Agenda

- Why is application design different now?
- App design principles and standards
- Examples and other resources



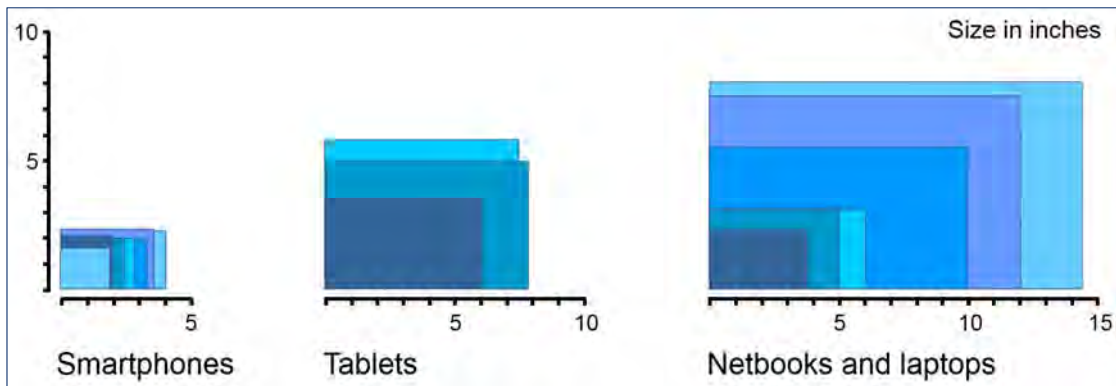
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THE MAIN CHALLENGE



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Display Size Variances



From *User interface design for the mobile web*, by James Lentz, WebSphere experience architect (July 2011)

- Severe size variance - the old display resolution issue
- Orientation can shift – portrait, landscape



Tablet



Smart Phone

TOP ~~20~~ ~~10~~ 3 DESIGN PRINCIPLES



Top 3 Design Principles



1.Design for mobile first



2.Visual, not textual



3.Simple navigation

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Principle 1: Design for Mobile First

- Use modern components
 - Gesture- and orientation-aware
 - “Responsive design”
 - Automatic resizing and “folding”
- For mobile-only applications:
 - Incorporate mobile device services
 - Camera, GPS, contacts
- Add social features
 - Collaboration, instant messaging, etc.



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More 1: Design for Mobile First

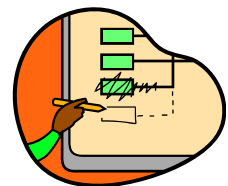
- Use design patterns
 - Oracle Alta UI skins, icons, colors
 - For example, “infotile”
 - Tabs containing data (related or not)
 - Drill into/down for details
- Test on the narrowest width device
 - View reacts to orientation shift
 - Tiles move with width change
 - Containers and contents resize automatically
 - “No horizontal scrolling.”



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Principle 2: Visual not Textual

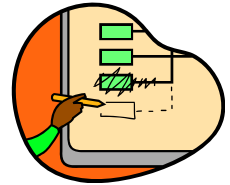
- Really important for success
- Simple design elements
 - Quick to render
 - Flat – few lines, little “chrome,” no gradients or shadows
- Easy to read
 - Saturated colors for competition with ambient light
 - Use color to highlight important data
 - Big icons and buttons
 - Text uses large fonts



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More 2: Visual, not Textual

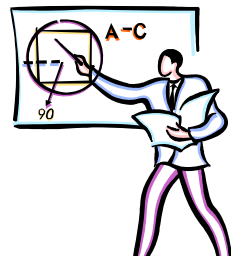
- Emphasize the most important content
 - It must appear regardless of orientation or device
- Offer analytics – for example, graphs
 - For quick decisions, but don't overdo



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Principle 3: Simple Navigation

- Easy to return to opening page
 - Content, not chrome, provides navigation
 - Breadcrumbs
- Two-minute tasks
 - Work done in short spurts
 - Solves the short attention span and distractions issues
- Summarize essential data
 - Drill down to details
 - Information hierarchy
- Shallow menus (2 levels)

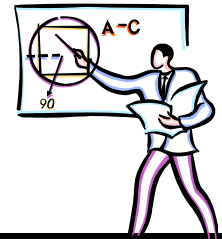


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More 3: Simple Navigation

- Search must be easy
 - Select criteria from lists
 - Aim for single field (Google-like)
 - Voice-enabled, if possible
- Scroll vertically only
- Alternative views for same data
 - Card, map, list
- Data entry using lists if possible

Google



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A SAMPLE STANDARD



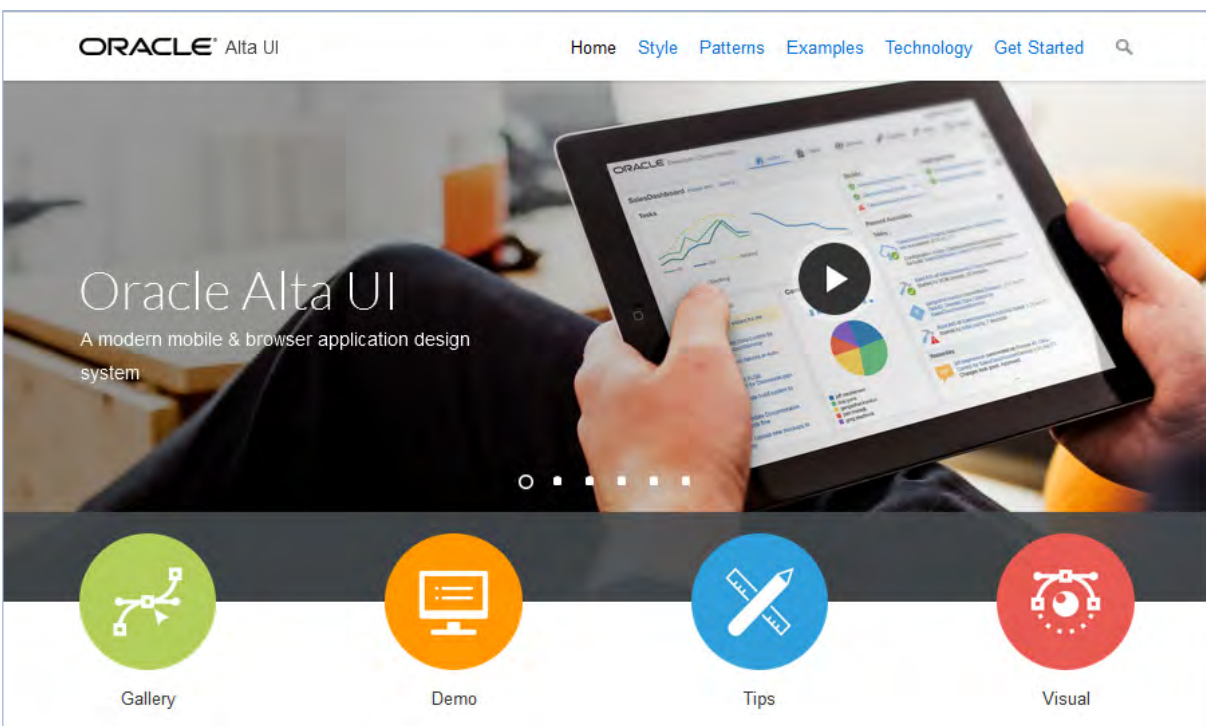
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Oracle Alta UI

- Released at OOW 2014
 - Developed for Oracle Cloud applications
 - f.k.a., Fusion Applications
 - Part of Oracle's UX effort
- Home page
 - bit.ly/oraclealta **OR**
 - www.oracle.com/webfolder/ux/middleware/alta/index.html



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ORACLE Alta UI

[Home](#) [Style](#) [Patterns](#) [Examples](#) [Technology](#) [Get Started](#) [Search](#)

Alta UI Gallery

Explore our growing collection of sample designs!

BROWSER

MOBILE

UI Patterns Browser | Mobile

Filter Gallery [Search](#)

Categories

[View All](#)

[About](#)

[Branding Area](#)

[Colored Regions](#)

[Dashboard](#)

[Data Grids](#)

[Dialog](#)

[Forms](#)

[Home Page](#)

[Master Detail](#)



Modal About page with Navigation Links

Category: [Modal Page Pattern](#), [About Pattern](#)



Modal About page

Category: [Modal Page Pattern](#), [About Pattern](#), [Branding Pattern](#)



Links to First-Time User Assistance

Category: [User Assistance Pattern](#), [Colored Regions Pattern](#)



Demo

ORACLE JET Work Better

[Search](#) steven.king@myorg.com

[Dashboard](#)

[People](#)

[Organization](#)



My Organization



Open Headcount 3

New Hires 30

Terminations 1

CURRENT QUARTER

Attrition History

Compensation Ratio

Above Range 8

About Me



My Notifications



FRIDAY, MAY 8, 2015

Average Compensation



TOP SIX ORGANIZATIONS

My Org Activities

91 89

Average Rating

3.6



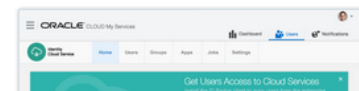
Tips

Make your application shine!

Getting The Most From Oracle Alta UI

Get the most out of the Oracle Alta UI design system by embracing the entire system. Products that make the most of Oracle Alta UI are designed around the Oracle Alta UI Design Principles including layouts, responsive designs, Alta skin, components and approaches for [visually presenting content](#) to users in a clean, uncluttered and highly consumable way.

Utilize modern layout approaches



Utilize modern layout approaches

- Simpler, less dense, uncluttered layouts
- Favors flowing pages conducive to mobile and responsive
- Allows for flexible configurations
- Emphasis on fewer elements and cleaner designs
- Minimal UI chrome with fewer nested borders and lines

[More About Oracle Alta UI](#) | [Page Layout](#) | [Design Principles](#)



Design For Mobile First

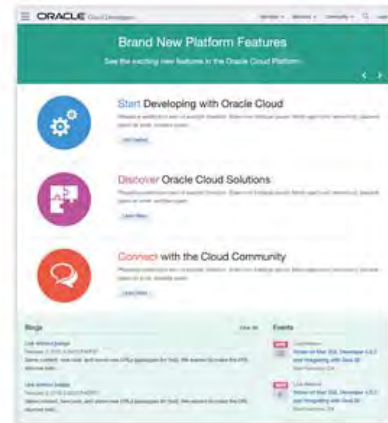
- Layouts fit within a tablet display width and are allowed to flow vertically
- Avoid vertically stretching layouts, to permit responsive design
- Incorporate responsive design techniques



Feature the Oracle Alta UI skin

- Fresh visual design complements modern layout approach
- Minimal UI chrome with fewer nested borders and lines
- More spacious padding and spacing
- Larger text, buttons and touch targets

[Oracle Alta UI Design Patterns Browser](#) • [Mobile](#) | [New Development With Oracle Alta UI Skin](#)



Use the new Oracle Alta UI Icon System

- Flexible in structure
- Lightweight in rendition



Use the new Oracle Alta UI Color Palette

- Extends the Oracle Alta UI Icon Palette
- Mix and match colors
- Create a seamless visual language with color
- Noticable and engaging primary messaging colors
- Clean and soft complimentary colors add fresh appeal

[Oracle Alta UI Color Palette](#) | [Icon Palette](#)



Engage users with more visual content

- Strategically use data visualizations and info graphics



Design for all users

Highly visual user interface designs can be made accessible; in fact, they can enhance accessibility. For example, visuals are especially helpful to people with some cognitive disabilities. Some things to consider:

- Content which enlarges, sufficient color contrast, and no reliance on specific colors help people with low vision.
- Text equivalents (e.g. alternative text for images) and semantic identification (e.g. things that look like buttons, labels and headings are identified as such) help people who are blind.
- Supplying audio information as text (e.g. captions or transcripts) helps people with hearing impairments.
- Ensuring everything can be done from the keyboard helps people with motor disabilities or who need to use voice recognition.
- Simpler layouts, understandable labels and instructions, and consistency of the design help people with cognitive disabilities.

More about Accessibility [W3C Designing for Inclusion](#)



ORACLE[®] Alta UI

[Home](#) [Style](#) [Patterns](#) [Examples](#) [Technology](#) [Get Started](#) [Search](#)

Visual Content

Data visualizations and info graphics increase insight

See more UI samples in the [Oracle Alta UI Gallery](#) and in the [Examples page](#)!

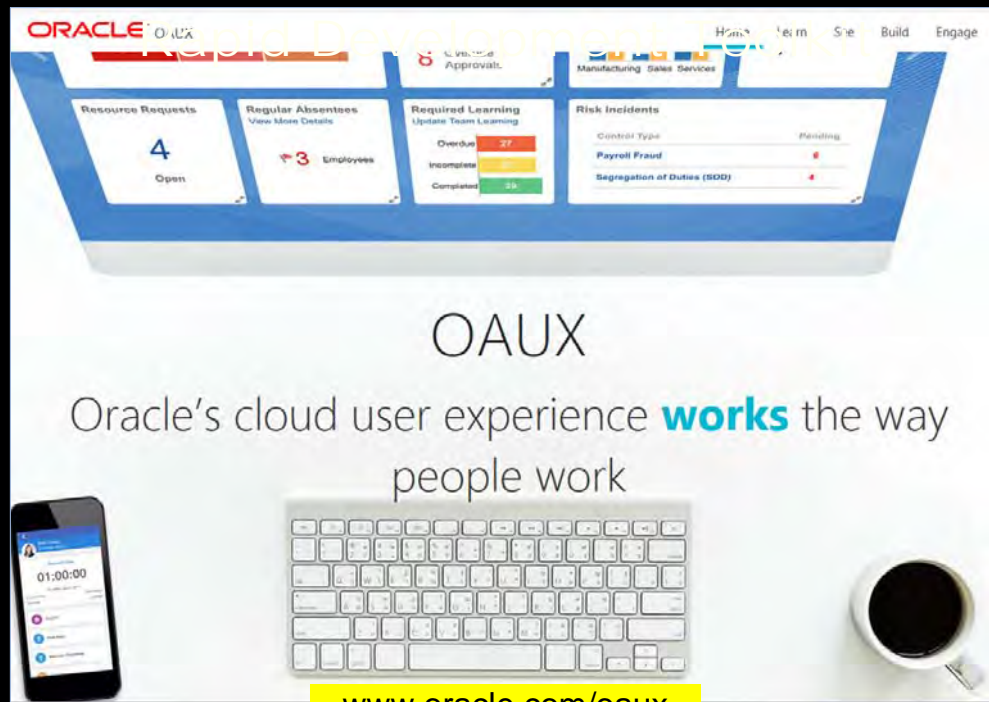
Cut Through Information Smog And Maximize Insight

A key design principle of Oracle Alta UI is to engage users with more visual content. Use of visual and typographical techniques make modern application pages more easily consumable and more pleasureable to use.

Strategic Use Of Visual Content

- Makes pages more browsable
- Makes important information pop





Oracle Applications User Experience

- Implements UX and Alta UI principles
- UX Rapid Development Kits
- Blog: blogs.oracle.com/oaux
- Working applications
- “Wireframe” templates
 - Powerpoint objects you can use for design purposes
- eBook instructions
- Video instructions
- Built for cloud applications but **use it for custom apps**, too

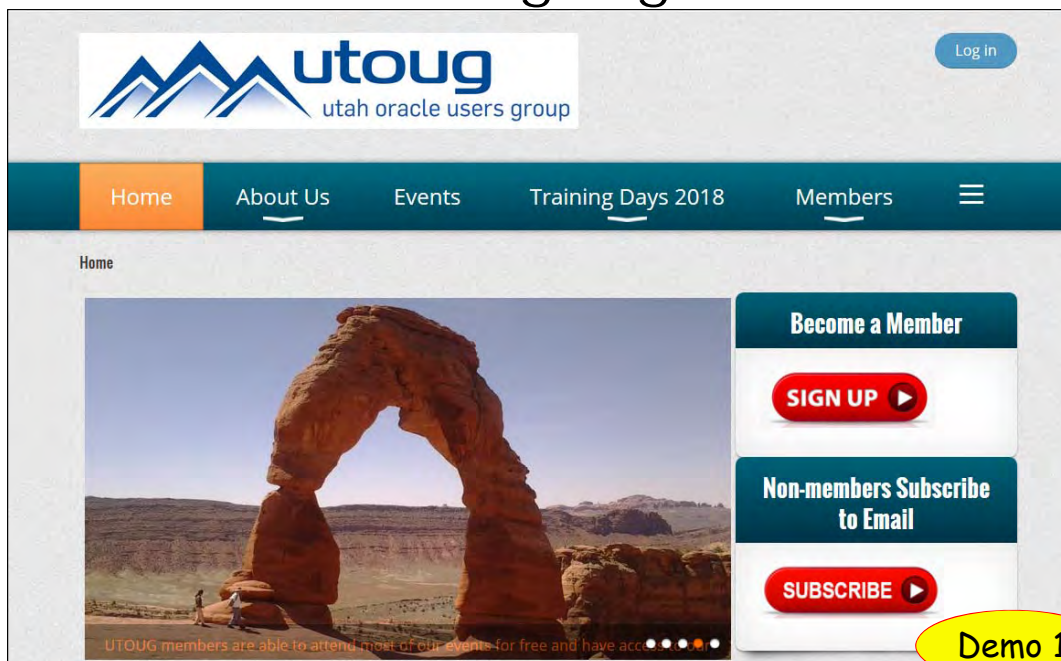
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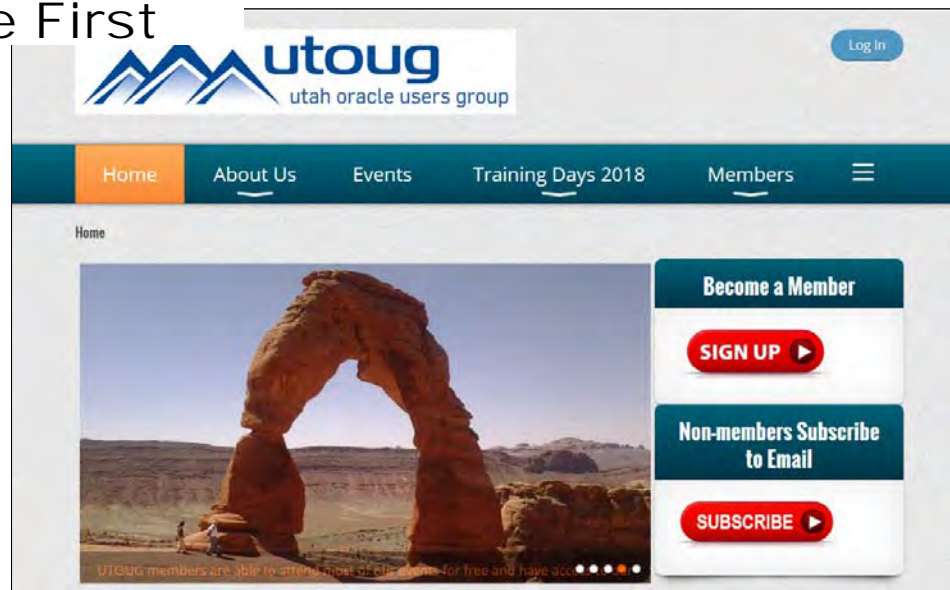
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utoug.org



Principle #1: Design for Mobile First

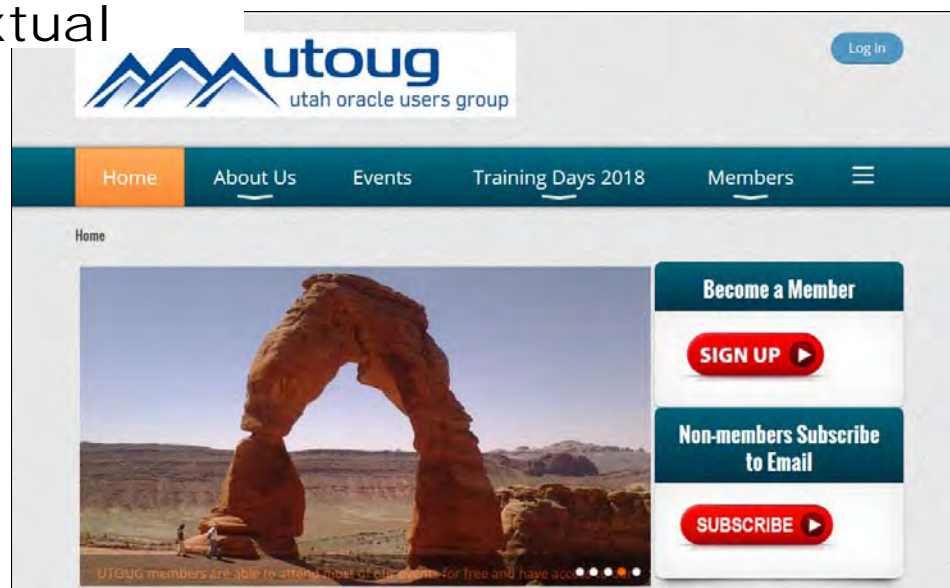
- Modern components
 - Gesture, orientation
 - Auto resize
 - Folding
- Social features
- Mobile-only
 - Not applicable
- Test on narrowest width device



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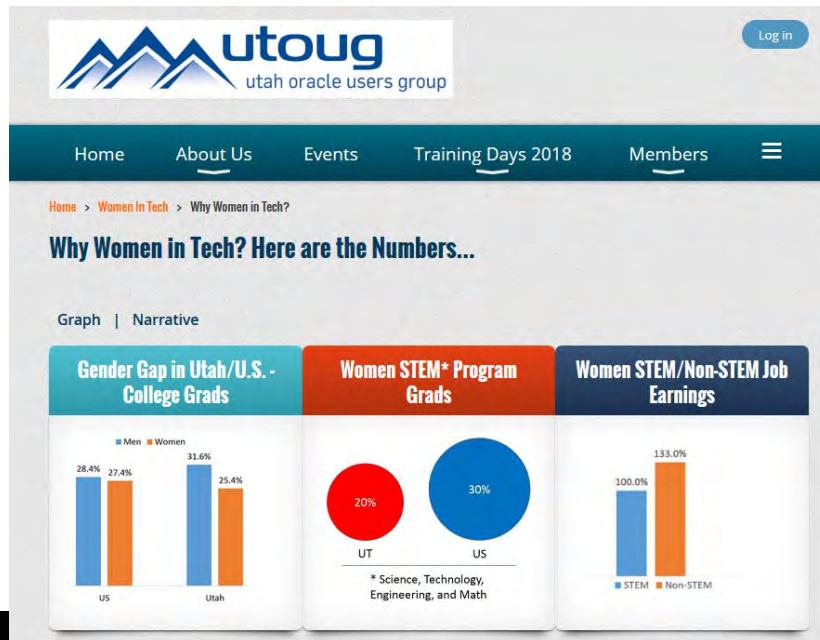
Principle #2: Visual Not Textual

- Simple design elements
 - Flat graphics
- Easy to read
 - Saturated color
 - Color highlights
 - Big icons and text
- Most important content first
- Analytics
 - Graphs not text



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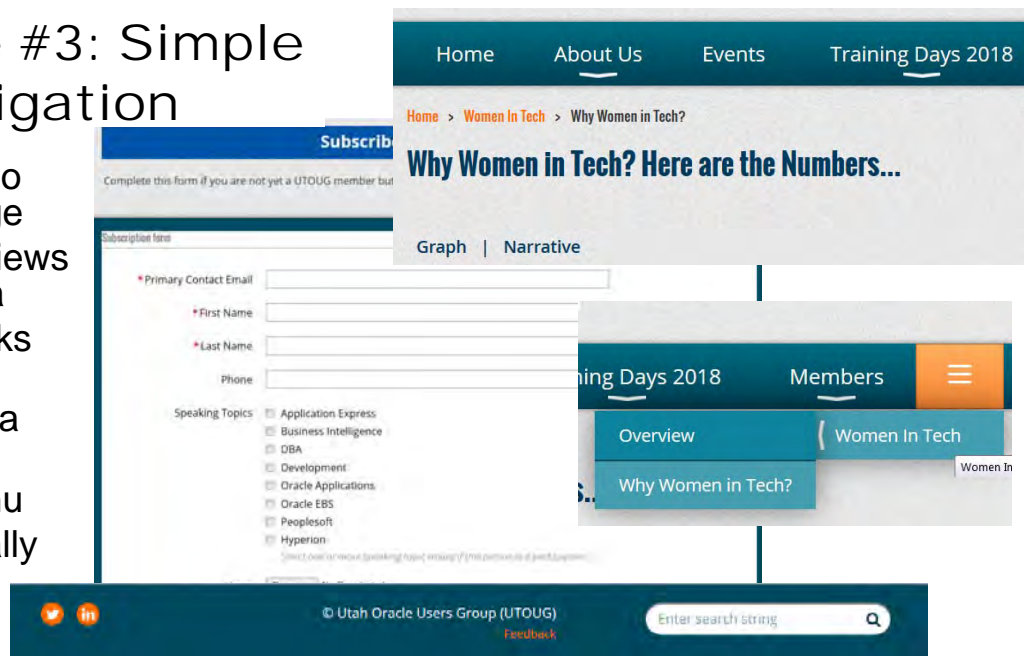
Principle #2: Visual Not Textual p2



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Principle #3: Simple Navigation

- Easy return to previous page
- Alternative views of same data
- 2-minute tasks
- Summarize essential data (N.A.)
- Shallow menu
- Scroll vertically only
- Easy search



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Principle #3: Simple Navigation p2

Special Interest Groups

As part of your UTOUG Membership, you may join one or more Special Interest Groups (SIGs). Our SIGs provide opportunity to meet and network in more focused, Oracle-related subject areas. Each SIG holds meetings 3-5 times per year.

To become a member of a SIG:

1. Login to the utoug.org website.
2. Click "View profile," then "Edit profile." Click Profile under the Save button.
3. Check the desired SIG(s) next to Group participation.

Oracle Application Express (APEX) SIG

The APEX SIG offers developers and anyone else interested in rapid application development the opportunity to network and share information with peers who are using this cool tool from Oracle.

APEX is a browser-based rapid application development tool from Oracle. As the name implies you can build interactive web applications that easily hook into your Oracle database.

Frequency: QUARTERLY

Organizers: Jeff Eberhard APEX_SIG@utoug.org
Glen Plazier APEX_SIG@utoug.org

Oracle DBA SIG

+

Oracle BI SIG

+

Oracle Applications SIG

+

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Example: ADF

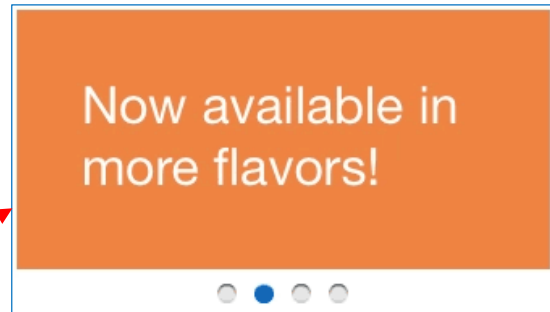
- Application Development Framework 12c - R12.2.1
- New components that support multiple interface paradigms
 - Finger tap on a mobile device == mouse click on a desktop device
 - Rendering accommodates varying sizes and orientations
- Backported to 11g
 - 11.1.1.9 used for Fusion Apps
- Most are also available in MAF
 - Mobile Application Framework



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"New" ADF Faces Mobile Components

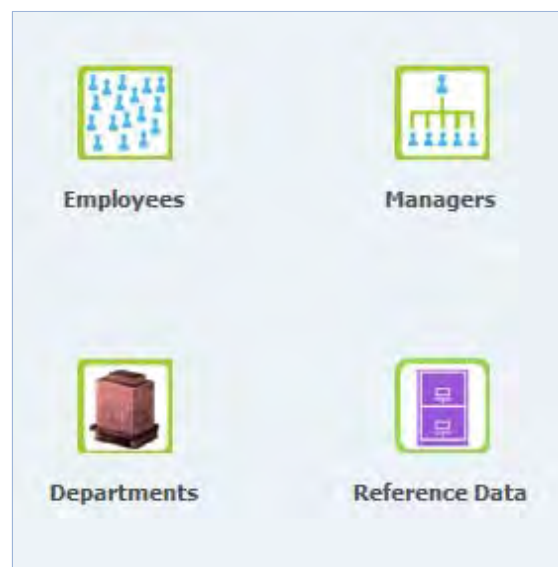
- Panel Springboard
- Panel Drawer
- List View
- Others
 - Card Deck (af:deck)
 - Diagram (dvt:diagram)
 - Led gauge (dvt:ledGauge)
 - Dial gauge, Status Meter Gauge



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Panel Springboard - Navigation

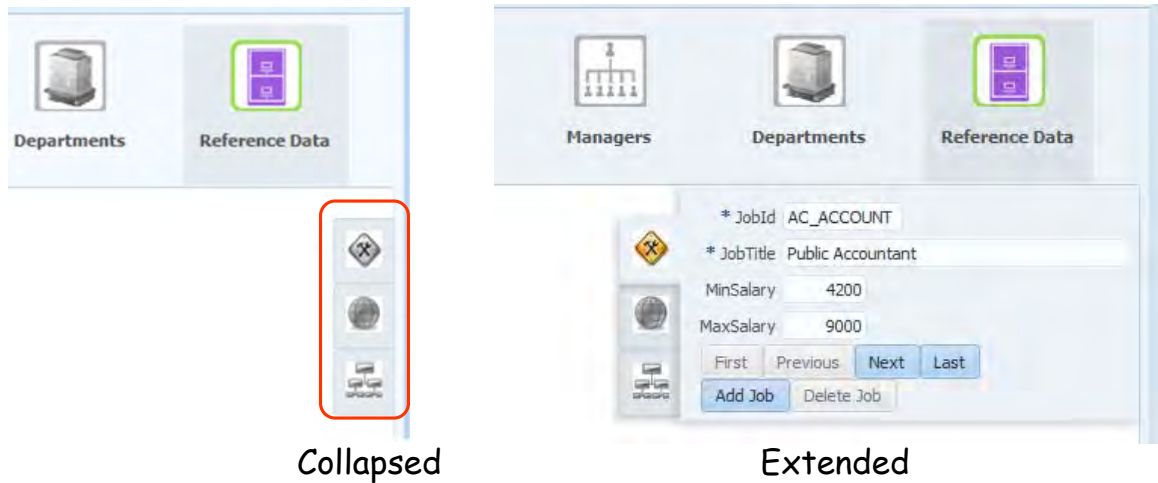
- Not a pulldown or a list
- Graphical
 - Iconic
- Uses
 - "Apps store" icons
 - App functions



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Panel Drawer - Alternative to Tabs

- Animated content display



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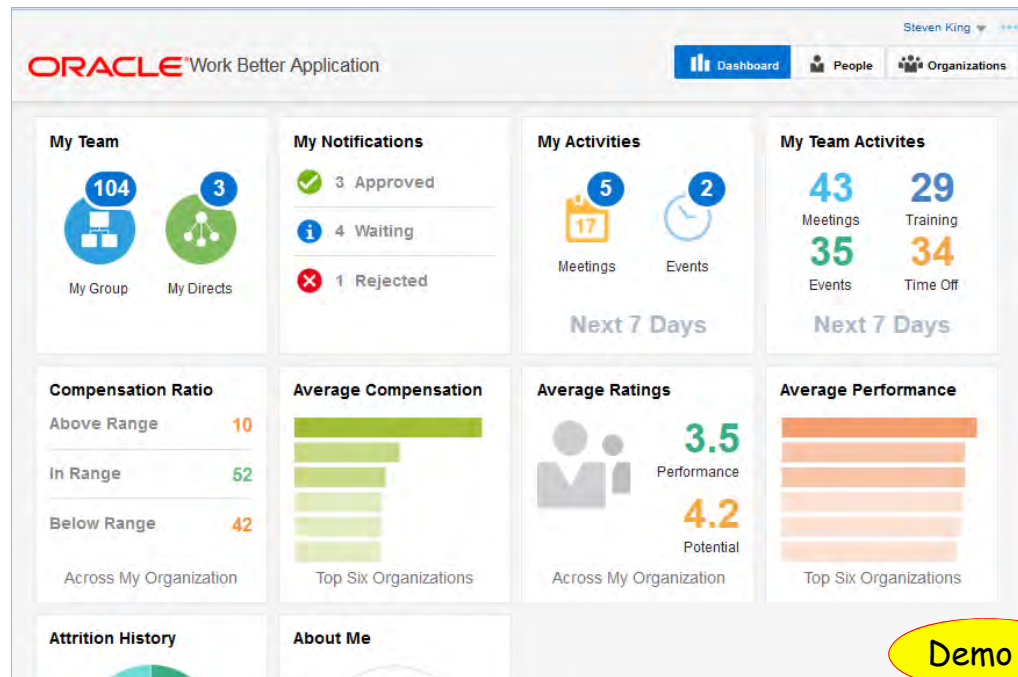
List View - Data Display

- Abbreviated list (not table of all values)
- List expands to show more data



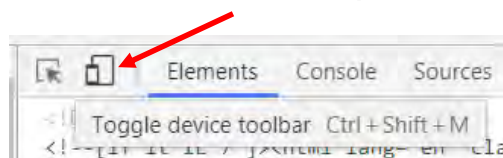
55

Work Better - ADF



Google Resources

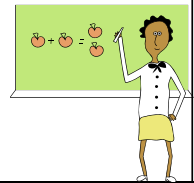
- <https://developers.google.com/search/mobile-sites/>
- Mobile friendliness site tester
- What to consider when hiring a web developer (!?)
- Mobile device emulator for Chrome browser
 - [...] → More tools → Developer tools → [Toggle device toolbar]



Demo 3

From Shay Schmeltzer, Oracle Guru Extraordinaire

- Introduction
 - https://blogs.oracle.com/shay/entry/a_guide_to_developing_your
 - https://blogs.oracle.com/jdeveloperpm/entry/get_the_oracle_alta_ui
- Building with Oracle Alta UI
 - *Oracle Alta UI Development with Oracle ADF Faces*
 - Related blog is mentioned in the Youtube notes
 - www.youtube.com/watch?v=oUNdxY7L-3w



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Examples: JET

- JavaScript Extension Toolkit
- FixIt Demo
 - <http://www.oracle.com/webfolder/technetwork/jet/globalExamples-App-FixItFast-Demo.html>
- Work Better Demo
 - http://www.oracle.com/webfolder/technetwork/jet/public_samples/WorkBetter/public_html/index.html



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Non-Oracle Perspectives

- *User Interface Design for the Mobile Web*, James L. Lentz, July 2011
– <http://www.ibm.com/developerworks/library/wa-interface/>
- Smashing Magazine
– <http://www.smashingmagazine.com/guidelines-for-mobile-web-development/>
- Code My Views
– <https://codemyviews.com/blog/mobilefirst>



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Quote

To be happy in this world,
first you need a cell phone
and then you need an airplane.
Then you're truly wireless.

— Ted Turner (1938-)

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Summary

- Mobile apps have raised the bar for UI design
- Remember Top Three Principles
 - Design for mobile first
 - Visual not textual
 - Simple navigation and display
- Start with prebuilt, proven patterns in Alta UI
- Use modern components
- Test using multiple devices (Google emulator)



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- Please fill out the evaluations
- 7 of 8 books co-authored with Dr. Paul Dorsey, Avrom Roy-Faderman, & Duncan Mills
- Slides will be on the NoCOUG website

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