ALT-TAB: Better APEX Tabs

Scott Spendolini
Director & Co-Founder



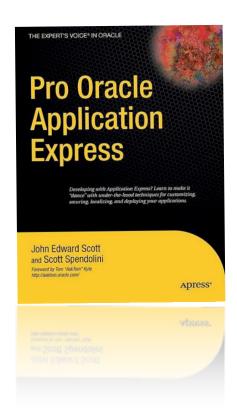
Welcome



ABOUT THE PRESENTER

Scott Spendolini

- scott@sumneva.com
- @sspendol
- Ex-Oracle Employee of 10 years
 - Senior Product Manager for Oracle APEX from 2002 through 2005
- Founded Sumner Technologies in October 2005
- Co-Founded Sumneva in January 2010
- Oracle Ace Director
- Co-Author,
 Pro Oracle Application Express
- "Scott" on OTN Forums







ABOUT SUMNEVA

- Specializing in Oracle Application Express
 - Training
 - Instructor Led On-Site or Online
 - Private & Public
 - Consulting
 - Anything APEX-related
 - Solutions/Products
 - sumnevaSERT
 - sumnevaFramework







AGENDA

- Overview
- Alternative Tabs
 - jQuery UI
 - CSS Dropdown Menu Framework
- APEX 4.0 UI Changes
- Summary

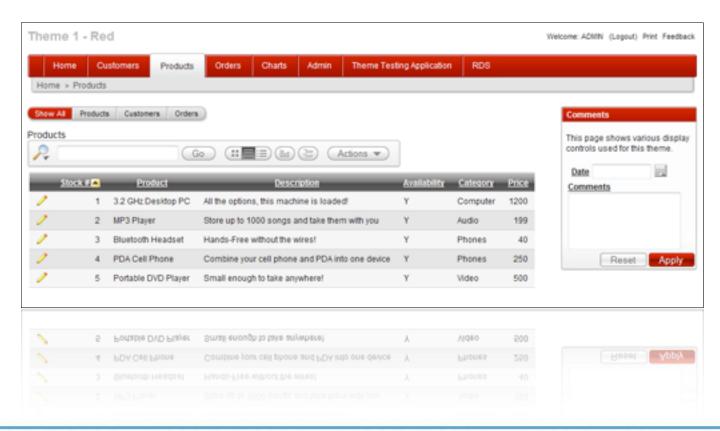


APEX 4.0 UI Changes



NEW APEX 4.0 THEMES

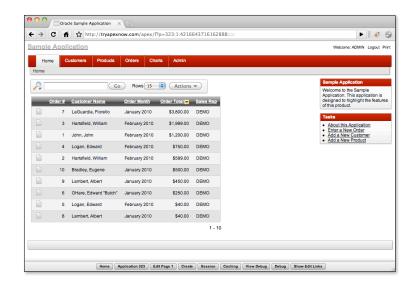
- Several new themes included in APEX 4.0
 - Total of 20 Interchangeable Themes

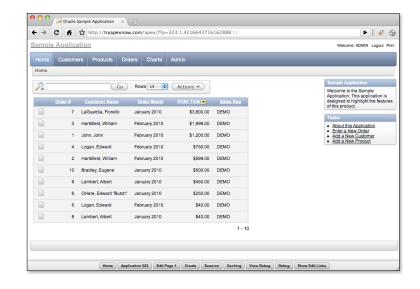




THEMES

- All new themes are DIVbased
 - Only 5 are IE6 Compatible
 - Denoted by the * next to their names
- Most themes have been "cleaned up" to better meet standards and/or to fix bugs







BACKWARD COMPATIBILITY

- Five Themes still use HTML tables for their layout
 - Ensures compatibility with older browsers
 - Table-friendly themes include:
 - Theme 13
 - Theme 15
 - Theme 16
 - Theme 18
 - Theme 20



New Features in APEX 4.0 Templates

- "Embedded" Regions
 - Can now easily have a Region within another Region
 - Part of the Region properties



DIV-BASED LAYOUT

- Most of the new APEX 4.0 Themes use a DIV-based layout model
- What is a DIV?
 - A container for blocks of content
 - More practical than TABLEs for overall design
 - Can and do still use **TABLEs** for row/column reports
 - Easier to manipulate & manage with JavaScript/jQuery



DIVS DEMONSTRATION

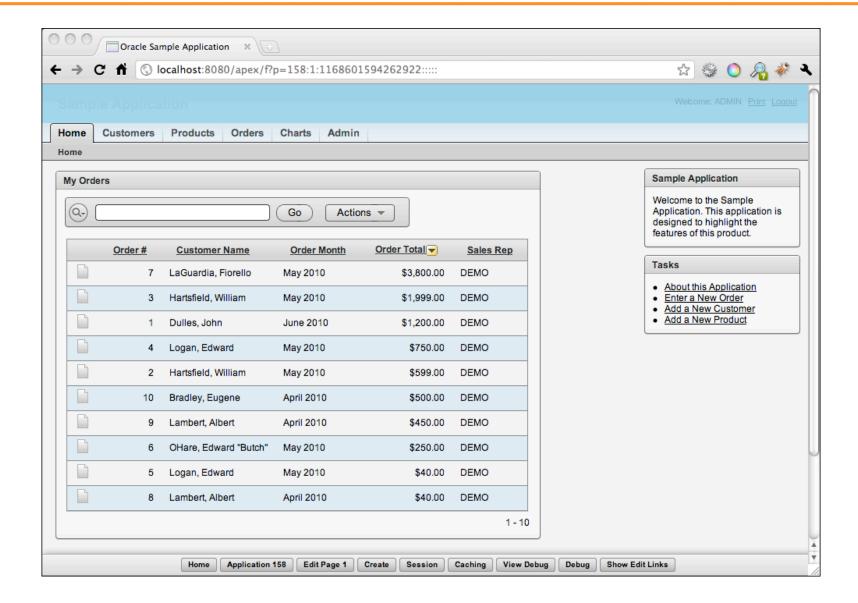


STRUCTURE OF AN APEX 4.0 TEMPLATE

- Each page is made up of several DIVs
 - header
 - tabs
 - topbar
 - messages
 - body
 - footer
- Each DIV has sub-DIVs
 - And those DIVs may also have sub-DIVs

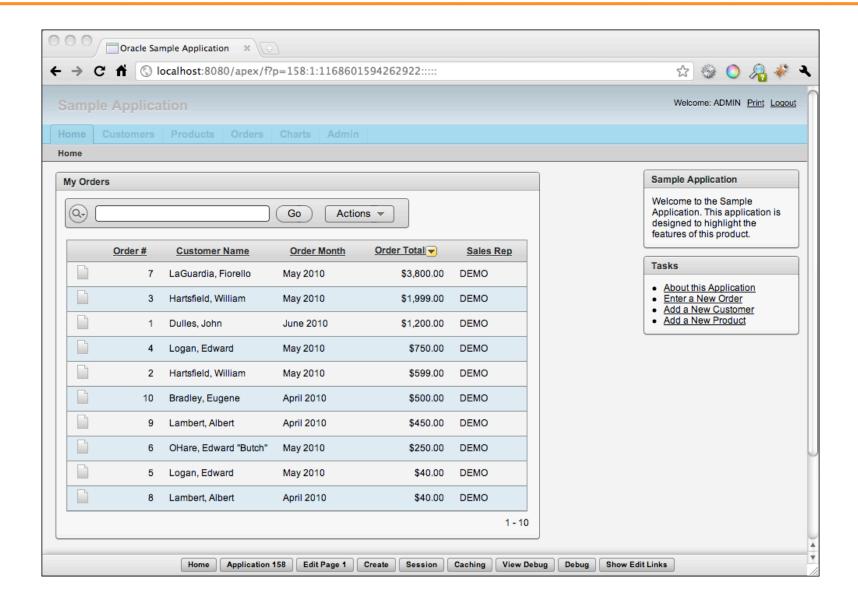


HEADER



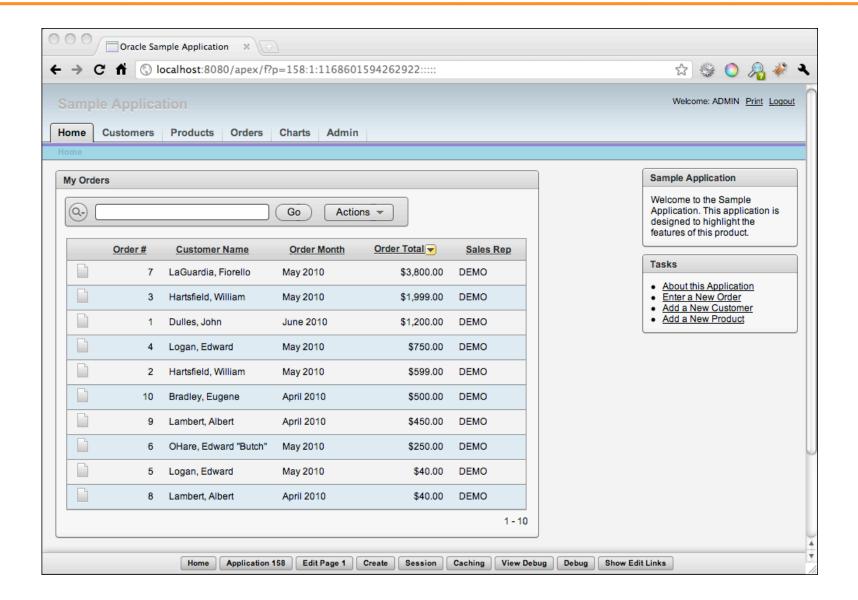


TABS



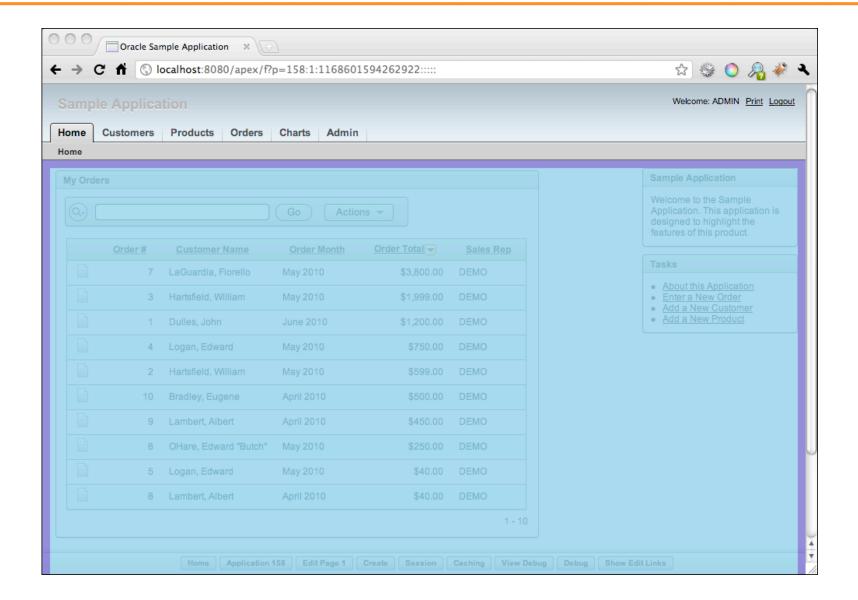


TOPBAR



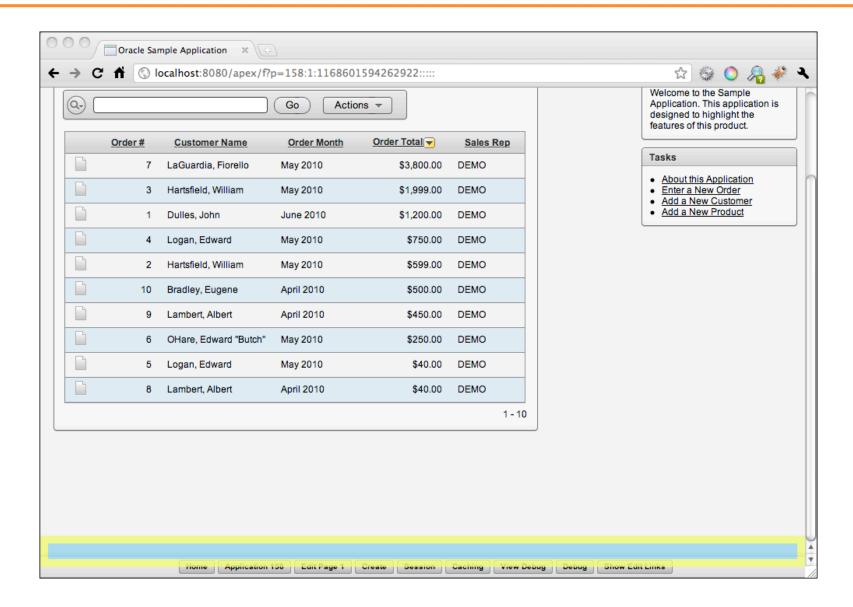


BODY





FOOTER





PAGE HEADER

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Strict//EN" "http://www.w3.org/TR/</pre>
xhtml1/DTD/xhtml1-strict.dtd">
<html lang="&BROWSER LANGUAGE." xmlns="http://www.w3.org/1999/xhtml"</pre>
xmlns:htmldb="http://htmldb.oracle.com" xmlns:apex="http://apex.oracle.com">
<head>
 <title>#TITLE#</title>
 <link rel="icon" href="#IMAGE PREFIX#favicon.ico" type="image/x-icon">
  <link rel="shortcut icon" href="#IMAGE PREFIX#favicon.ico" type="image/x-</pre>
icon">
 #HEAD#
 <link rel="stylesheet" href="#IMAGE PREFIX#themes/theme 4/css/theme 4 0.css"</pre>
type="text/css" />
 <!--[if IE]><link rel="stylesheet" href="#IMAGE PREFIX#themes/theme 4/css/
theme 4 0 ie.css" type="text/css" /><![endif]-->
 <!--[if IE 6]><link rel="stylesheet" href="#IMAGE PREFIX#themes/theme 4/css/
theme 4 0 ie6.css" type="text/css" /><![endif]-->
 <!--[if IE 7]><link rel="stylesheet" href="#IMAGE PREFIX#themes/theme 4/css/
theme 4 0 ie7.css" type="text/css" /><![endif]-->
</head>
<body #ONLOAD#>
<!--[if lte IE 6]><div id="outdated-browser">#OUTDATED BROWSER#</div><![endif]--
#FORM OPEN#
```

PAGE BODY

```
<div id="header">
 <div id="logo"><a href="#HOME LINK#">#LOGO##REGION POSITION 06#</a></div>
 #REGION POSITION 07#
 <div id="navbar">
   <div class="app-user">#WELCOME USER#</div>
   #NAVIGATION BAR#
   #REGION POSITION 08#
 </div>
</div>
<div id="tabs">
 <div class="frame">
   <div class="bq">
    <div class="tab-holder">
      #TAB CELLS#
    </div>
  </div>
 </div>
</div>
<div id="topbar">#REGION POSITION 01##REGION POSITION 04#</div>
<div id="messages">#SUCCESS MESSAGE##NOTIFICATION MESSAGE##GLOBAL NOTIFICATION#</div>
<div id="body">
 #REGION POSITION 02##BOX BODY#
      #REGION POSITION 03#
    </div>
```



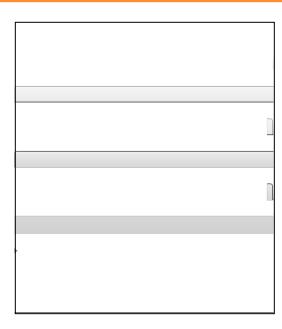
PAGE FOOTER

```
<div id="footer"><div class="content">
    #REGION_POSITION_05#
    <div id="customize">#CUSTOMIZE#</div>&nbsp;
</div></div></div>
#FORM_CLOSE#
</body>
</html>
```

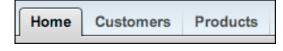


SPRITE MAPS

- Sprite Maps consolidate several smaller images into one large image
 - Faster to load one larger image vs. several smaller images
- Only a portion of the image is displayed on the page
 - Controlled by CSS backgroundposition attribute



Tabs Sprite Map Image



Actual Tabs



Sprite Maps DEMONSTRATION



Tabs



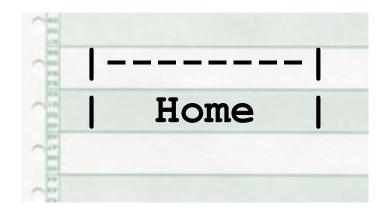
HISTORY OF TABS





HISTORY OF TABS

- The first tab was developed in 1962 by IBM & DARPA
 - Data was stored on over 2,000 punch cards
 - Took over 3 hours just to load
 - Used all I6KB of RAM
- End Result:







HISTORY OF TABS

- Tabs have been a common navigational device since the early days of client-server applications
 - Once HTML-based applications became popular, it wasn't long before the tab followed
- Most web sites today both large
 & small make some use of
 tabs in one way or another
 - Google, Amazon, Twitter, Facebook, Yahoo, etc.



AMAZON.COM CIRCA 1999

- When Amazon.com launched in 1995, it didn't look very good
 - At least not by today's standards
- It also didn't have any tabs
 - As did many sites of that time period



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Eyes & Editors, a personal notification service

Like to know when that book you want comes out in paperback or when your favorite author releases a new title? Eyes, our tireless, automated search agent, will send you mail. Meanwhile, our human editors are busy previewing galleys and reading advance reviews. They can let you know when especially wonderful works are published in particular genres or subject areas. Come in, meet Eyes, and have it all explained.

Your Account

Check the status of your orders or change the email address and password you have on file with us. Please note that you **do not** need an account to use the store. The first time you place an order, you will be given the opportunity to create an account.



AMAZON.COM CIRCA 2000's

- However, its UI quickly evolved over the years
 - As the site expanded, so did the number of tabs used:





AMAZON.COM TODAY

 Today, Amazon.com opts for a navigation list on the left side in lieu of tabs on its home page





AMAZON.COM TODAY

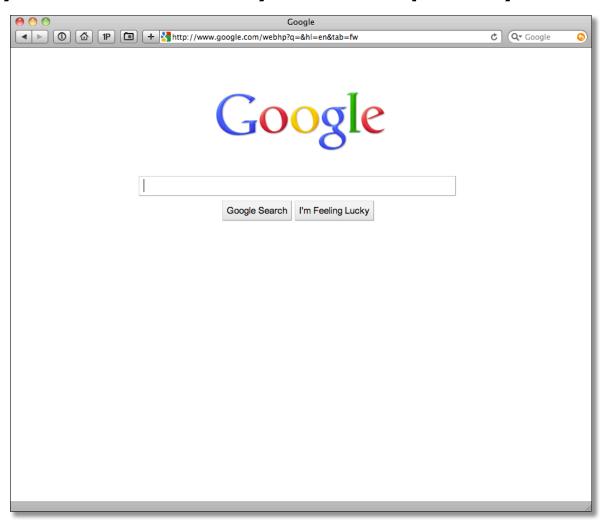
 Once you select a department, you will see a subtle line of sub-navigation tabs





GOOGLE'S TABS

Simplicity + Consistency > Complexity





APPLE'S TABS

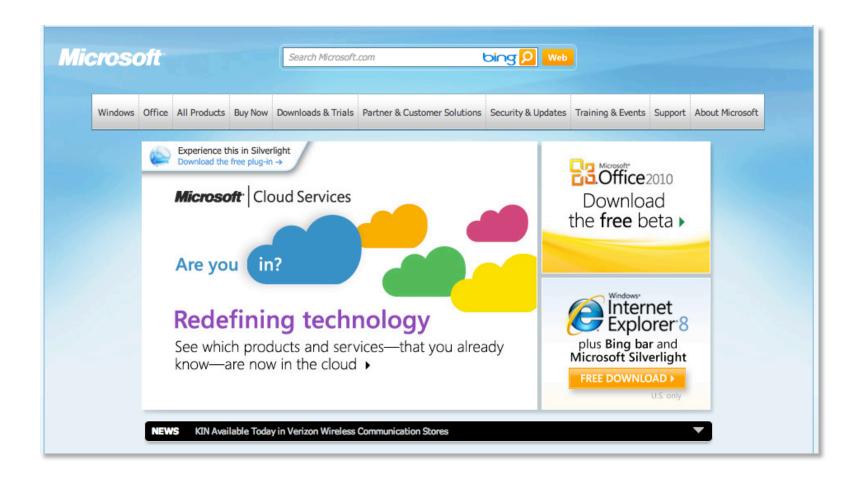
(Simplicity + Consistency) * Style > Complexity





MICROSOFT'S TABS

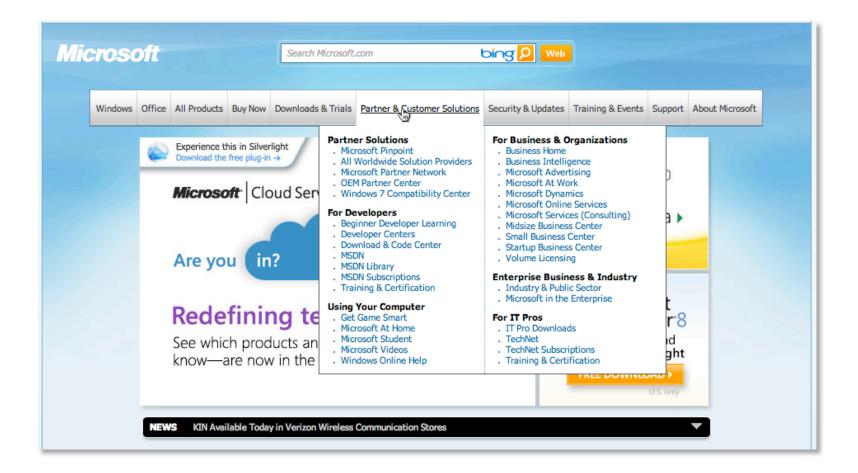
Simplicity + Consistency > Complexity





MICROSOFT'S TABS

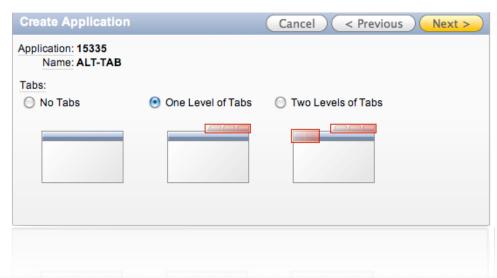
Simplicity + Consistency + Complexity = 0





APEX & TABS

- Almost every APEX application ever written makes use of some form of tabs
- Why is this so?
 - Default option when creating an application
 - Tabs are a de-facto navigation control
 - "Easier" to use than other types of navigation controls
 - Why Not?





APEX BUILT-IN TABS

- APEX's tab mechanism has changed little over time
 - Almost the same in APEX 4.0 as it was in HTML DB 1.6
- APEX provides support for no,
 one or two levels of tabs
- Overall UI used to make up tabs is in need of a refresh
 - APEX 4.0 helps, but the underlying infrastructure is the same





PC LOAD LETTER

 To say that APEX's built-in tabs are frustrating to use would be a vast understatement...





UPSIDE DOWN

sumneva Application Success

- tabs, as you need to create new master or parent tabs The very confusing when converting from one to two levels of

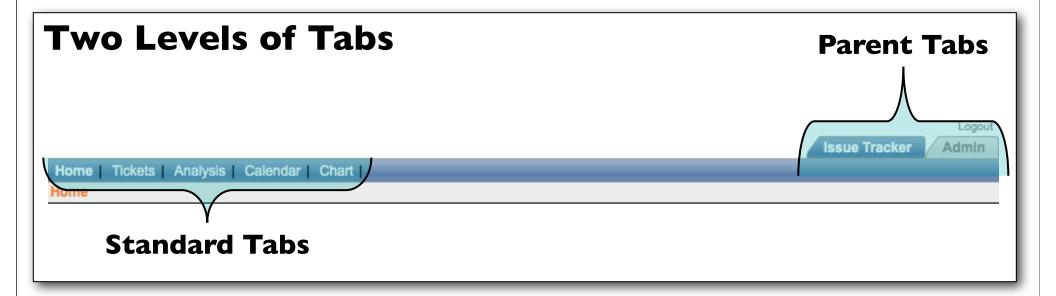
 - Thus, you're essentially creating orphaned tabs
 - Parent or Master tab
 - All Standard Tabs will have a pseudo-tab as their
 - - Which is another name for Detail Tabs

called the **Standard Tabs**

- What seem to be the Parent Tabs are actually something
 - are actually created upside-down
 - One-Level APEX tabs the most common type •

UPSIDE DOWN

One Level of Tabs Pseudo Parent Tab Home Standard Tabs Logout Home Tickets Analysis Calendar Chart





APEX TAB DEFICIENCIES

- Several things have to line up just right for tabs to work properly:
 - Correct Page Template must be selected
 - Tab must be current for the corresponding Page
 - Page must be mapped to the corresponding Standard
 Tab Set
 - Standard Tab must be mapped to the corresponding Standard Tab Set
 - Standard Tab must map to the corresponding Parent
 Tab Set or Pseudo Parent Tab Set



APEX TAB DEFICIENCIES

- APEX uses a JavaScript function to submit the page when tabs are clicked
 - APEX 3.2: doSubmit('TabName');
 - APEX 4.0: apex.submit('TabName');
- Deficient for a couple of reasons
 - JavaScript was required for basic navigation
 - Issue with some mobile devices
 - Google would not follow or index the tab's links
 - Harder to get a site indexed



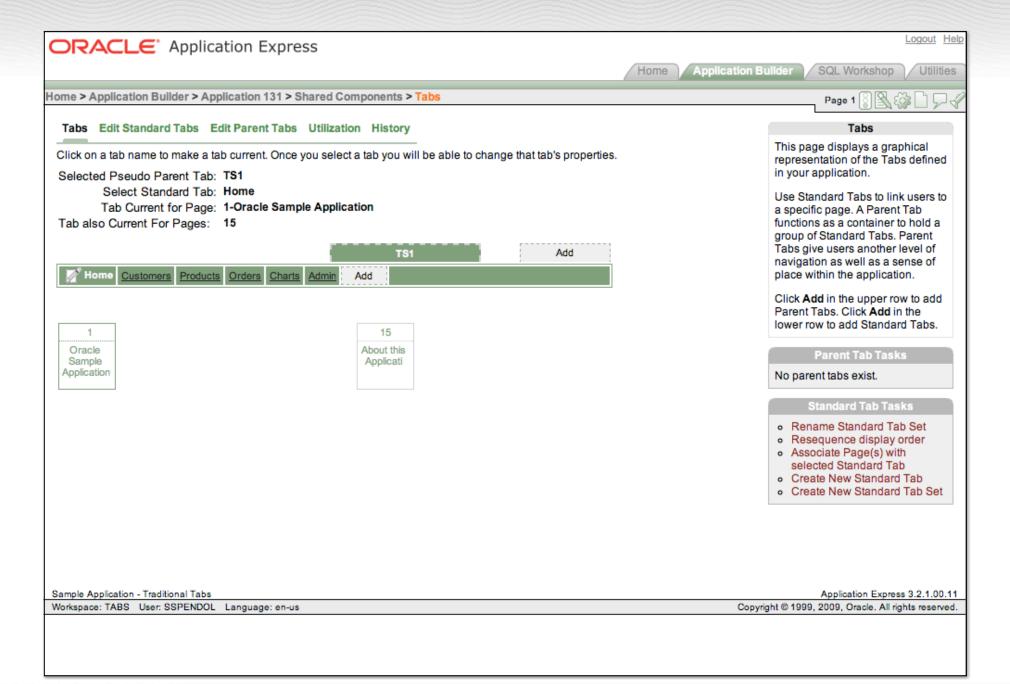
GETTING FRUSTRATED Working with APEX Tabs E M O N S T R A T I O N



APEX 4.0 TAB ENHANCEMENTS

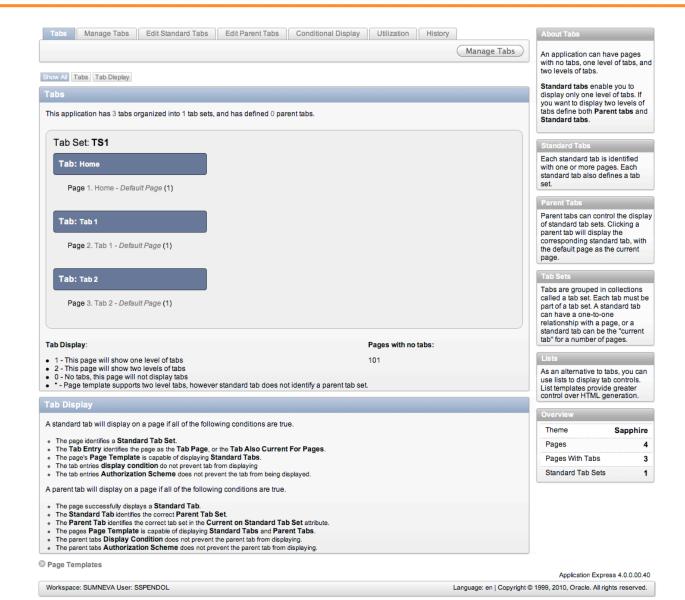
- Little has changed in the way tabs are implemented in APEX 4.0
 - Still just as confusing
- There are a couple new reports and several new regions that attempt to make tabs easier to use
 - Found under Shared Components > Tabs







APEX 4.0 TABS MANAGEMENT PAGE





TAB SUMMARY

Tabs

This application has 3 tabs organized into 1 tab sets, and has defined 0 parent tabs.

Tab Set: TS1

Tab: Home

Page 1. Home - Default Page (1)

Tab: Tab 1

Page 2. Tab 1 - Default Page (1)

Tab: Tab 2

Page 3. Tab 2 - Default Page (1)

Tab Display:

- · 1 This page will show one level of tabs
- . 2 This page will show two levels of tabs
- 0 No tabs, this page will not display tabs
- . * Page template supports two level tabs, however standard tab does not identify a parent tab set.

Pages with no tabs:

101



TAB DISPLAY

Tab Display

A standard tab will display on a page if all of the following conditions are true.

- The page identifies a Standard Tab Set.
- The Tab Entry identifies the page as the Tab Page, or the Tab Also Current For Pages.
- The page's Page Template is capable of displaying Standard Tabs.
- · The tab entries display condition do not prevent tab from displaying
- The tab entries Authorization Scheme does not prevent the tab from being displayed.

A parent tab will display on a page if all of the following conditions are true.

- The page successfully displays a Standard Tab.
- . The Standard Tab identifies the correct Parent Tab Set.
- The Parent Tab identifies the correct tab set in the Current on Standard Tab Set attribute.
- The pages Page Template is capable of displaying Standard Tabs and Parent Tabs.
- The parent tabs Display Condition does not prevent the parent tab from displaying.
- The parent tabs Authorization Scheme does not prevent the parent tab from displaying.



OTHER DETAILS

About Tabs

An application can have pages with no tabs, one level of tabs, and two levels of tabs.

Standard tabs enable you to display only one level of tabs. If you want to display two levels of tabs define both Parent tabs and Standard tabs.

Tab Sets

Tabs are grouped in collections called a tab set. Each tab must be part of a tab set. A standard tab can have a one-to-one relationship with a page, or a standard tab can be the "current tab" for a number of pages.

Parent Tabs

Parent tabs can control the display of standard tab sets. Clicking a parent tab will display the corresponding standard tab, with the default page as the current page.

Standard Tabs

Each standard tab is identified with one or more pages. Each standard tab also defines a tab set.

Overview	
Theme	Sapphire
Pages	4
Pages With Tabs	3
Standard Tab Sets	1



OTHER DETAILS

About Tabs

An application can have pages with no tabs, one level of tabs, and two levels of tabs.

Parent Tabs

Parent tabs can control the display of standard tab sets. Clicking a parent tab will display the corresponding standard tab, with

St. Lists

tab Sta

As an alternative to tabs, you can use lists to display tab controls. List templates provide greater control over HTML generation.

Tabs are grouped in collections called a tab set. Each tab must be part of a tab set. A standard tab can have a one-to-one relationship with a page, or a standard tab can be the "current tab" for a number of pages.

Theme	Sapphire
Pages	4
Pages With Tabs	3
Standard Tab Sets	1



Alternative Tabs



jQuery UI



JQUERY UI

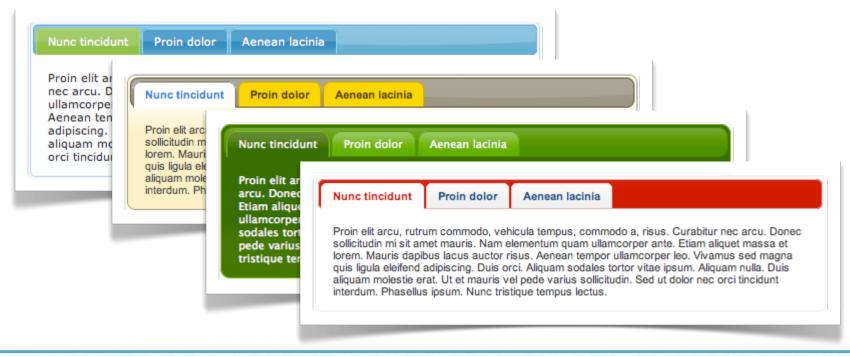
- Provides a set of **UI components** that sit on top of jQuery
 - Tabs, Calendars, Widgets, Buttons, Effects, etc.
- APEX 4.0 will have both jQuery & jQuery UI included
 - Can easily be installed to work with APEX 3.x as well





JQUERY UI TABS

- Robust, configurable jQuery IU component that can be styled to match almost any UI theme
 - Contain hooks into jQuery to capture all types of events
 - Support for loading content via Ajax





JQUERY UI TAB DRAWBACKS

- No easy support for sub-tabs
- Require jQuery & jQuery UI
 - Not an issue with APEX 4.0+
- Involves working knowledge of jQuery & JavaScript to implement
- Must make modifications to existing templates in order to properly integrate
- In APEX, jQuery UI Tabs are better suited to hide & show regions; not pages



JQUERY TABS: GET 'EM WHILE THEY'RE HOT

- Blog entry by Dan McGhan on how to integrate jQuery UI Tabs & APEX
 - Concise, easy to follow steps
 - Takes only minutes to implement
 - http://www.danielmcghan.us/2009/07/jquerytabs-get-while-they-hot.html



jQuery UI Tabs DEMONSTRATION



CSS Drop-down Menu Framework



Overview



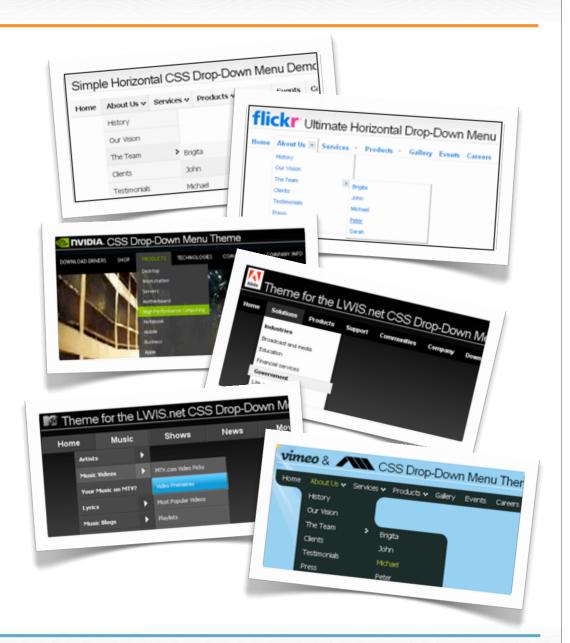
CSS Drop-down Menu Framework

- Free framework for CSS-based menus
 - Licensed under GNU GPL; donation requested
 - http://www.lwis.net/free-css-drop-down-menu/
- Modular Design with support for themes
- Easy to **Deploy** & **Transform**
- Cross-Browser
 - Only IE6 requires JavaScript; all modern browsers do not
- Extremely Lightweight & Fast!



THEME SUPPORT

- Support for **Themes**
 - Easily modifiable via CSS
- Included Themes:
 - General Purpose
 - Flickr
 - NVIDIA
 - Adobe
 - MTV
 - VIMEO

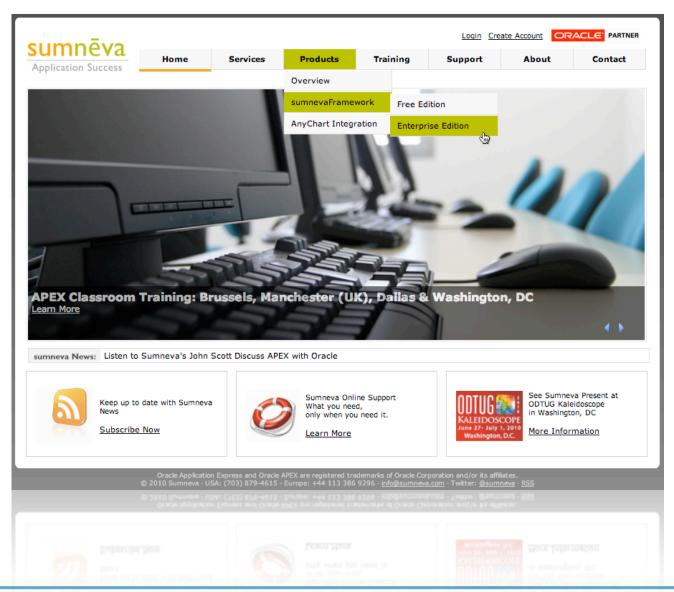




CSS Drop-down Menu Framework DEMONSTRATION



SUMNEVA.COM





STRUCTURE VS. STYLE

- All structure & style are completely separated
 - Structure: **HTML**
 - Style: CSS
- This approach has a number of benefits
 - Style of a site can quickly & easily be changed
 - Structure of a site is much simpler & easier to maintain
 - Site will be more Section 508 Compliant



In general, separating the structure from the style is a good design principle that should be applied everywhere.



Structure



How IT Works

- CSS Drop Down Menus simply use an HTML list to create the structure used for the tabs
 - Simple & Uncluttered
- Cascading Styles are then applied to the list to give them their style or user interface
 - Developer has complete control over the styles used
 - And never has to modify the corresponding HTML



THE RESULT

• Thus, this HTML Code:

```
<body>
<h1>Simple Horizontal CSS Drop-Down Menu Demo</h1>
<!-- Beginning of compulsory code below -->
<a href="./">Home</a>
  class="dir"> cm 
  class="dir"> co 
  class="dir"> co 
  <a href="./">Gallery</a>
  <a href="./">Events</a>
  <a href="./">Careers</a>
  class="dir rtl"> cm 
<!-- / END -->
</body>
</html>
</html>
</pody>
```

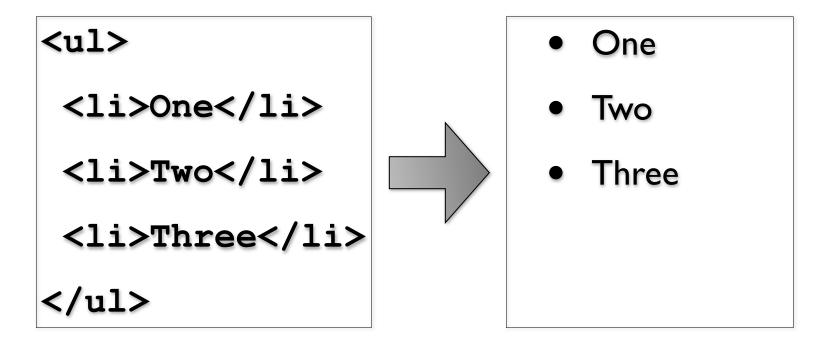
- When combined with a CSS file or files...
 - Yields this Menu:





HTML LISTS

- and are HTML tags that make up bulleted "lists" when rendered on the page
 - Each will also require a closing tag after its corresponding content

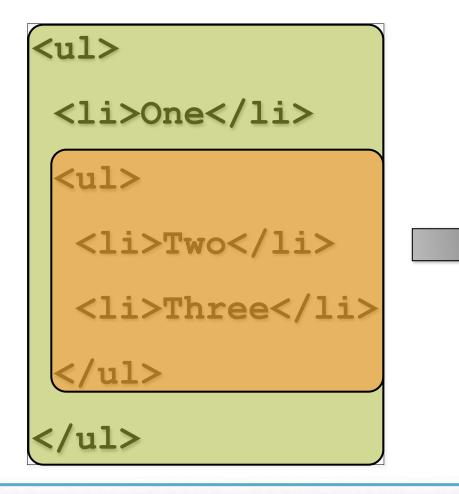




MULTIPLE LEVEL HIERARCHIES

By embedding additional

 tags, we can create a
 hierarchical list with any number of levels:





- One
 - Two
 - Three



CSS Drop Down Menu Example

```
<n1>
     <a href="./">History</a>
     <a href="./">Our Vision</a>
     class="dir"><a href="./">The Team</a>
        < n1>
           <a href="./">Brigita</a>
           <a href="./">John</a>
           <a href="./">Michael</a>
           <a href="./">Peter</a>
           <a href="./">Sarah</a>
        <a href="./">Clients</a>
     <a href="./">Testimonials</a>
     <a href="./">Press</a>
     <a href="./">FAOs</a>
  </1i>
```

- Home
- About Us
 - History
 - Our Vision
 - The Team
 - Brigita
 - John
 - Michael
 - Peter
 - Sarah
 - o Clients
 - Testimonials
 - o Press
 - o FAOs
- Services
 - Product Development
 - Delivery
 - Shop Online
 - Support
 - Training & Consulting
- · Products
 - o New
 - Corporate Use
 - Private Use
 - Used
 - Corporate Use
 - Private Use
 - Featured
 - o Top Rated
 - Prices
- Gallery
- Events
- Careers
- Contact Us
 - Enquiry Form
 - o Map & Driving Directions
 - Map
 - Driving Directions
 - Your Feedback



Style



STYLE

- All style definitions are stored in Cascading Style
 Sheets or CSS files
 - Visual attributes of the list elements, such as:
 - Width
 - Background Color
 - Font & Font Size
 - Margins & Padding



CSS ZEN GARDEN

- Example site which illustrates how the same HTML file can look dramatically different by only changing the contents of the CSS
 - Different graphic artists submitted only a CSS file & associated images and the best are on display
 - Dramatic illustration as to what can be achieved using only Cascading Style Sheets
 - View all of the designs online:
 - http://csszengarden.com



```
css Zen Garden: The Beauty in CSS Design
1P + % http://csszengarden.com/zengarden-sample.html
                                                                                       ¢ Qy Google
       <html xmlns="http://www.w3.org/1999/xhtml" xml:lang="en">
        <head>
CSS
        ▼ <body id="css-zen-garden">
            ▼ <div id="container">
                ▼ <div id="intro">
The

▼ <div id="pageHeader">
                       ▼ <h1>
A der
                              <span> css Zen Garden </span>
                          </h1>
Down
                       ▼ <h2>
                           ▼ <span>
The
                                 The Beauty of
                                 <acronym title="Cascading Style Sheets"> CSS </acronym>
Litter
                                 Design
Toda
                              </span>
and th
                          </h2>
                      </div>
The c
                    ▼ <div id="quickSummary">
time-
                       ▼ 
                           ▼ <span>
So V
                                 A demonstration of what can be accomplished visually through
                                  <acronym title="Cascading Style Sheets"> CSS </acronym>
There
                                 -based design. Select any style sheet from the list to load it into this page.
begin
                              </span>
the or
                          CSS
                       class="p2">
                                                                                                                  ed
is by
                                                                                                                  les
                      </div>
of nea
                    <div id="preamble">
                   </div>
Part
                <div id="supportingText">
                <div id="linkList">
Grapl
                                                                                                                  at
               </div>
even
              <div id="extraDiv1">
You
                   <span> </span>
but fo
               </div>
              <div id="extraDiv2">
Down
              <div id="extraDiv3">
finish
              <div id="extraDiv4">
assoc
            <div id="extraDiv5">
            <div id="extraDiv6">
Bene
           </body>
css Ze
       </html>
Benefits
```







CSS Dropdown Menus CSS

- CSS Dropdown Menus requires three CSS files:
 - dropdown.css
 - Sets high level element attributes, such as **&**
 - default.advanced.css
 - References default.css
 - default.css
 - Almost all formatting changes made here
- Each of these can be modified as needed to match your graphic design specifications



Integration with APEX



INTEGRATION WITH APEX

- It's fairly simple to integrate CSS Dropdown Menus with APEX
 - Done using an APEX list & custom template
 - List will contain the **structure** for the tabs
 - Can be as many levels deep as you like
 - Template will be 100% HTML and reference the corresponding CSS files, which contain the style
 - The List template will take care of creating the hierarchy automatically



STEPS TO INTEGRATE

I. Create a List

 Add an entry to the list for each tab & sub-tab that you want to include

2. Crete a List Template

Using the CSS Dropdown Menu HTML files as a guide

3. Create a List Region on Page Zero

 May want to alter the page template and use a custom region position for better alignment/control



LISTS: BEST PRACTICES

- Group Pages in blocks of IOO or IOOO based on which "tab" will be current
- Set the Current List Entry attributes as follows:
 - List Entry Current for Pages Type
 - Exists SQL Query
 - List Entry Current for Condition
 - SELECT 1 FROM DUAL
 WHERE :APP_PAGE_ID BETWEEN 600 AND 699
- Thus, any page from 600-699 will set this tab to the current tab



Creating a List & List Template DEMONSTRATION



BEFORE LIST ENTRY

List Template Before Rows

TEMPLATE DEFINITION

List Template Current

• <a href="#LINK#"

class="currentTab">#TEXT#

List Template Current w/Sub Links

• <a href="#LINK#"
class="currentTab">#TEXT# ▼

TEMPLATE DEFINITION

- List Template Non-Current
 - #TEXT#
- List Template Non-Current with Sub List Items
 - ◆ #TEXT# ▼

- ListSub List Template Before Rows
 - •



SUB LIST ENTRY

- Sub List Template Current
 - #TEXT#
- Sub List Template Current w/Sub List Items
 - ◆ #TEXT# ▶

SUB LIST ENTRY

- Sub List Template Noncurrent
 - #TEXT#
- Sub List Template Noncurrent w/Sub List Items
 - ◆ #TEXT# ▶
- Sub List Template After Rows
 - •



AFTER LIST ENTRY

- List Template After Rows
 - •



Summary



SUMMARY

- APEX's tab mechanism is dated and hard to use
 - Most applications do, however, use it
- But it's easy to retrofit Lists to work as tabs
- Implementing new tabs gives your application a bit of sizzle that will make it stand out among other applications
 - While also allowing older browsers to be able to still view your site



Sumneya Application Success

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