



Your fastest way up the SharePoint learning curve.



SharePoint Brand Camp

WC-SBC301

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Introduction to SharePoint Branding

SharePoint sites don't have to look like SharePoint sites



Logistics

Daily Schedule

All times Eastern Time (GMT -0500)

- Lecture: 12:00pm - 1:15pm
- Q/A time: 1:15pm - 1:30pm
- Break: 1:30pm - 2:00pm
- Lecture: 2:00pm - 3:15pm
- Q/A time: 3:15pm - 3:30pm



Student Questionnaire

- What's Your Name and Company?
- What languages have you used?
 - HTML, XHTML, CSS and JavaScript
 - XML, XPath and XSLT
 - C# or VB.NET, ASP.NET Master Pages
- What design/branding tools have you used?
 - SharePoint Designer
 - Visual Studio and ASP.NET
 - Adobe Photoshop or Microsoft Expression
 - Legacy toolsets
DreamWeaver, FrontPage, Visual InterDev, Visual Notepad, etc



Agenda

- Introduction
- WSS Fundamentals
- Anatomy of a Team Site
- Understanding the role of CSS and Themes
- SharePoint Integration with Master Pages
- Working with the SharePoint Designer
- Understanding Features
- WCM using the MOSS Publishing Features



What is does Branding Mean?

- Branding:
 - The act of building a specific image or identity that people recognize in relation to your company
- Website Branding:
 - The colors, fonts, logos, and supporting graphics that make up the general look and feel of a corporate website.
- Branding for SharePoint:
 - Master pages, page layouts, CSS, web parts, XSLT, images, etc.



Why not “Design”

- The word “design” can often be confused with Software Design (planning for software development)



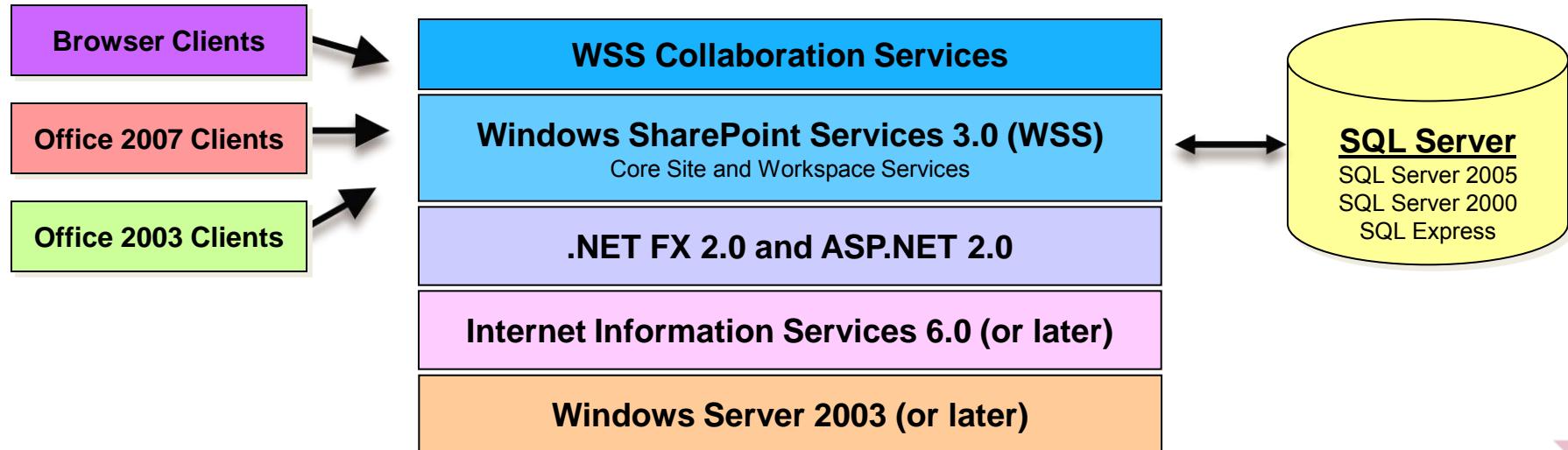
SharePoint Editions

- Windows SharePoint Services 3.0 (WSS) is the free version of SharePoint
 - Focused on collaboration with documents and light editing of web pages
- Microsoft Offices SharePoint Server 2007 (MOSS) is the licensed version of SharePoint
 - Includes among other capabilities the Publishing Feature
 - Much better platform for creating a strongly branded web site



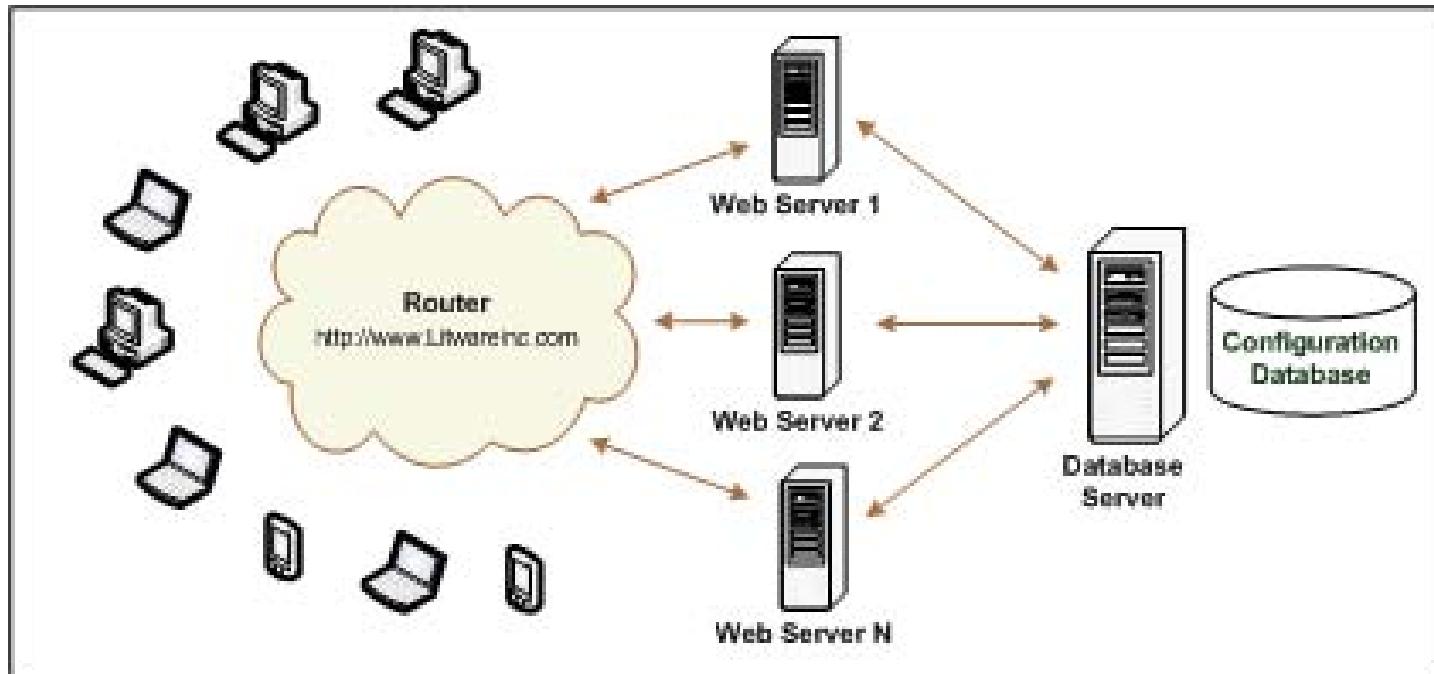
What is WSS?

- Windows SharePoint Services 3.0 (WSS)
 - An engine for creating/running/managing sites
 - Architecture designed to scale to 10,000s of sites
 - Platform for building Web application and solutions
 - Collaboration services included out-of-the-box



The WSS Farm

- WSS deployment based on a farm
 - Farm requires Web server(s) and database server
 - Farm can be single server or multi-server
 - Each farm has exactly one configuration database



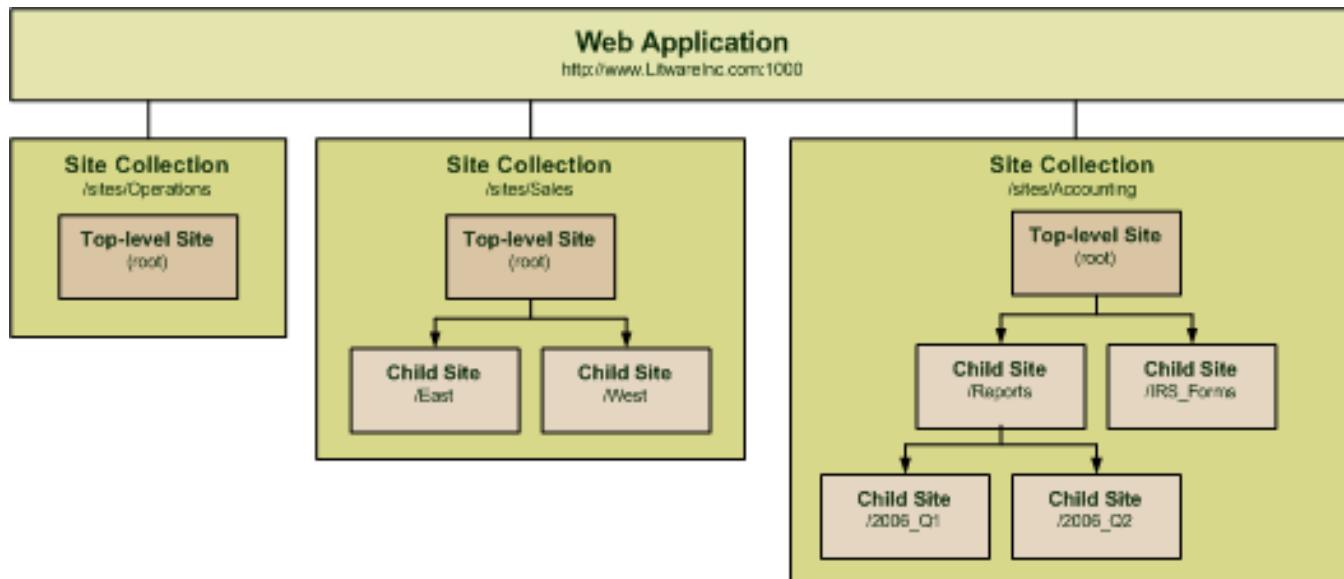
Web Applications

- Web Applications provide HTTP entry points
 - Web Applications based on IIS Web sites
 - Web Application defines one or more URL spaces
 - Web Application security configured independently



Site Collections and Sites

- Sites are partitioned using Site Collections
 - Site collection is scope for administrative privileges
 - Site collection always contains top-level site
 - Site collection may contain hierarchy of child sites
 - Web application can support 1000s of site collections



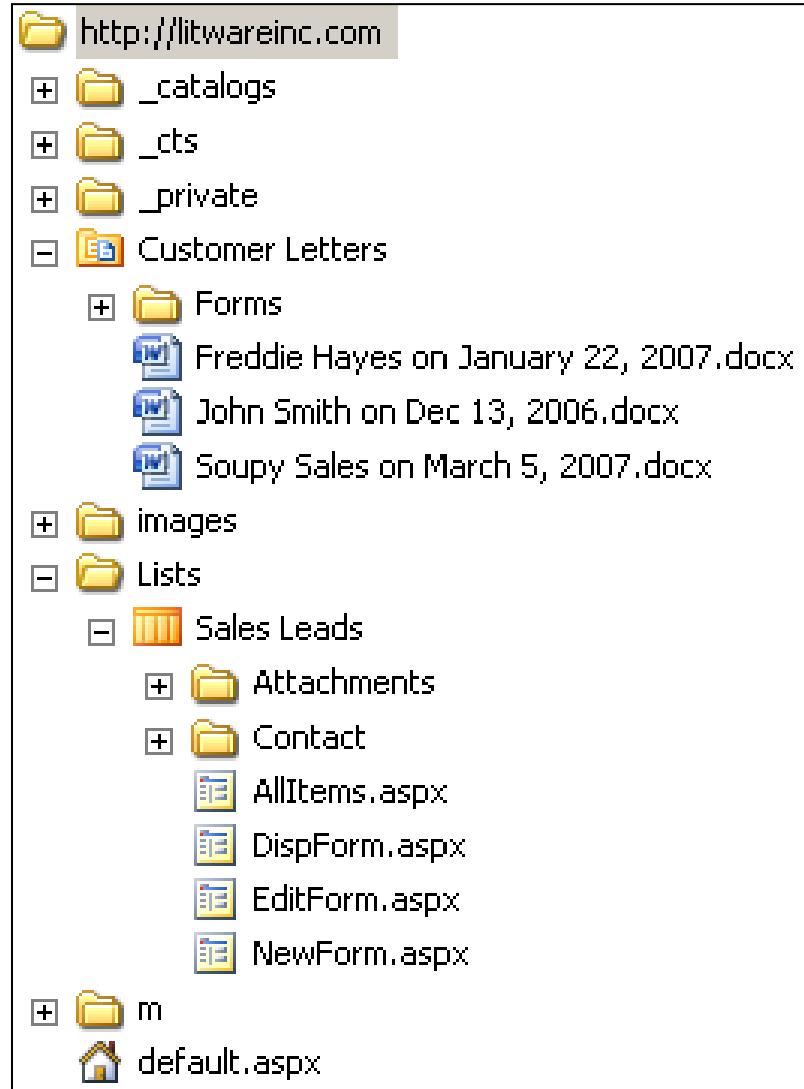
Team Sites

- Sites in WSS are known as Team Sites
- They are best suited for managing web based documents
- Also includes the concept of Web Part Pages for creating traditional web page content



The Virtual File System of a Site

- Site is a virtual file system
 - made up of folders and files
 - Pages are files
 - Documents are files
 - Stored in content database
- How can you look at it?
 - SharePoint Designer
 - Windows Explorer (WebDav)



The _layouts Virtual Directory

- Files in _layouts directory accessible to all sites
 - _layouts provides access to common resources
 - _layouts contains files for images, CSS and JavaScript
 - _layouts contains Application Pages
- All these URLs resolve to the same page
 - `http://Litwareinc.com/_layouts/settings.aspx`
 - `http://Litwareinc.com/sites/Vendors/_layouts/settings.aspx`
 - `http://Litwareinc.com:1001/sites/Accounting/_layouts/settings.aspx`



Site Pages Versus Application Pages

- Site Pages exist within virtual file system of site
 - They may or may not be ghosted (uncustomized)
 - They support customization via Web Parts
 - They support customization via SharePoint Designer
 - Customized pages impact performance and security
- Application Pages are deployed once per farm
 - They do not support customization or Web Parts
 - They are parsed/compiled as classic ASP.NET pages
 - They run faster than Site Pages
 - They always support code behind



SharePoint Integration with CSS

- WSS supplies core.css
- Several approaches to extend & override core.css



Understanding core.css

- All styles in WSS initially defined by core.css
 - Located in \TEMPLATE\AYOUTS\1033\STYLES
 - Contains over 4000 lines of CCS class definitions
 - Classes used throughout standard WSS UI elements
- Extending core.css
 - Applying WSS styles (meant for end users)
 - Applying custom CCS files (meant for developers)



SharePoint Themes

- WSS provides set of out-of-box themes
 - Collection of CSS file and graphics
 - Provide a means for applying simple to somewhat sweeping design changes
 - Out of the box themes are not very attractive and rarely match a corporate look and feel
 - Microsoft release 10 new themes recently

<http://blog.drisgill.com/2009/03/microsoft-released-10-new-sharepoint.html>



SharePoint Themes

- Theme files are deployed to front-end Web server
- WSS provides UI for users to apply themes
- Changes to themes are made in the SharePoint root 12 folder
- SharePoint Designer can be used to rapidly test changes to themes before making permanent



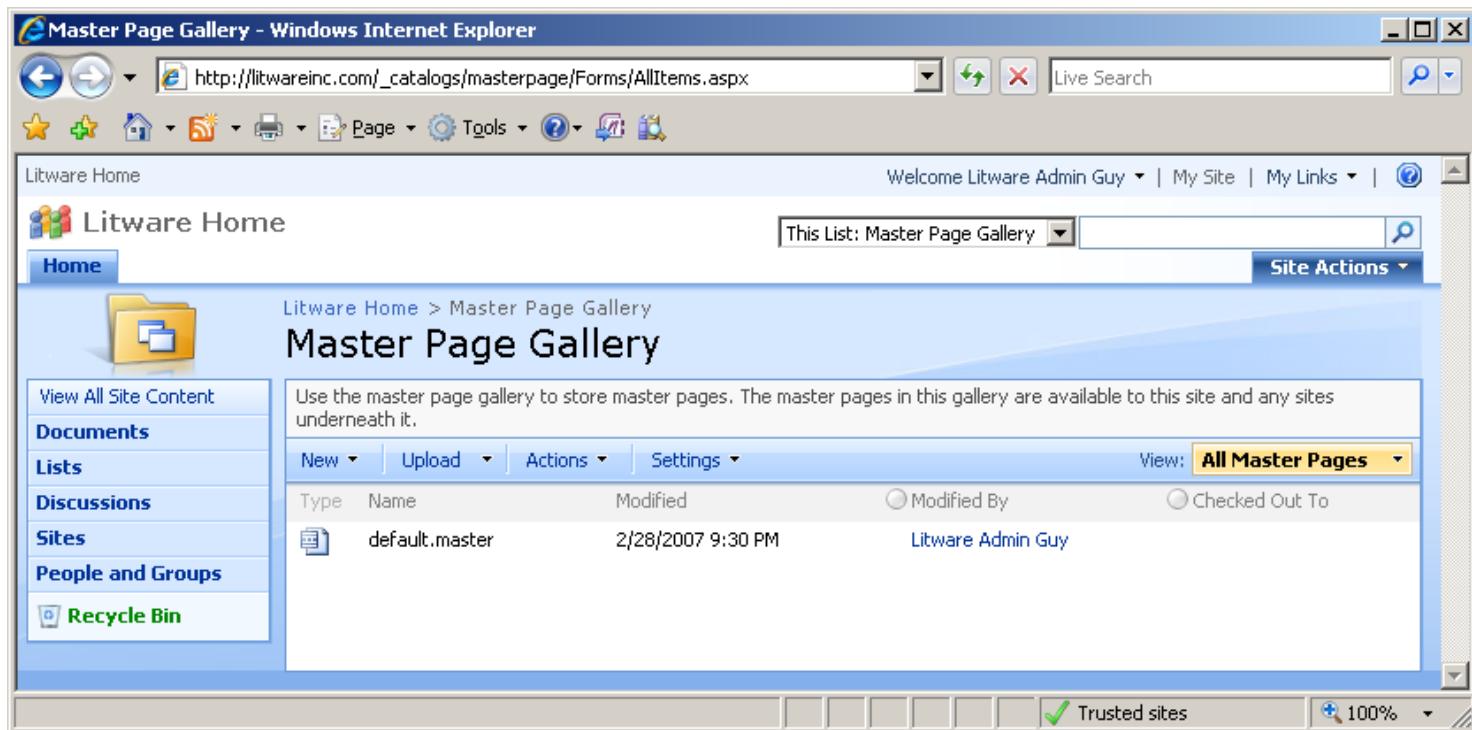
Master Pages in WSS

- Application pages (_layouts) use application.master
 - Farm-wide master page
 - Cannot be customized on per-site basis
- Site Pages use default.master by default
 - default.master is a page template
 - default.master instance created in Master Page Gallery
 - default.master can be customized on per-site basis
 - default.master can be replaced with different template

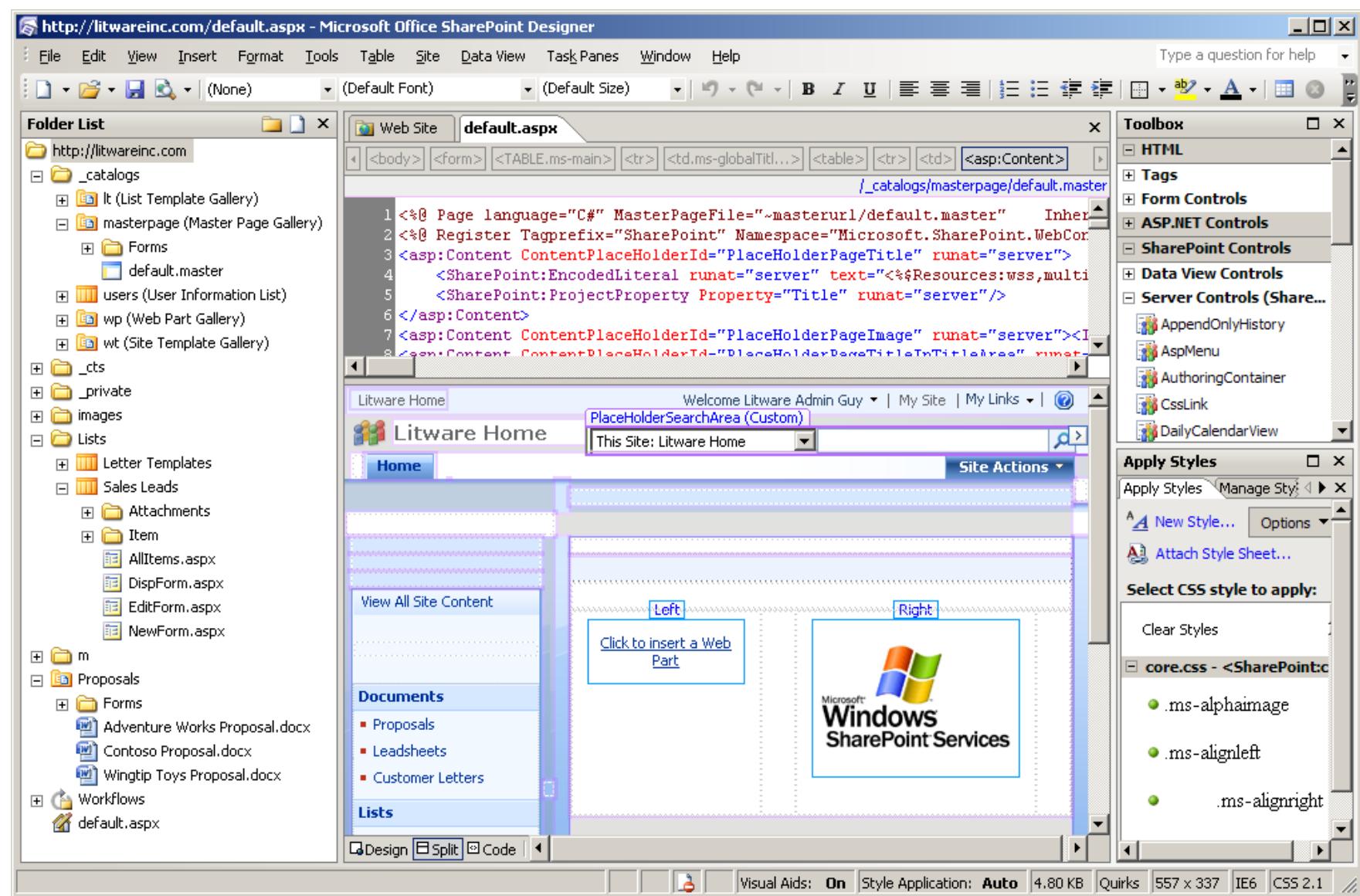


The Master Page Gallery

- Each site has a Master Page Gallery
 - Instance of default.master automatically provisioned
 - default.master can be customized on per-site basis



Customization with SharePoint Designer



What is a Feature?

- A building block for creating SharePoint solutions
 - A unit of design, implementation and deployment
- Features can contain elements
 - e.g. menu items, links, list types and list instances
 - Many other element types possible
- Features can contain event handlers
 - You can add any code which used WSS object model



User's View of Features

- Features support concept of activation/deactivation

The screenshot shows the 'Site Features' page in a Windows Internet Explorer browser. The URL is http://litwareinc.com/_layouts/ManageFeatures.aspx. The page title is 'Site Features'. It lists several features with their descriptions and activation status:

Name	Status
Office SharePoint Server Enterprise Site features Features such as the business data catalog, forms services, and Excel Services, included in the Office SharePoint Server Enterprise License	Activate
Office SharePoint Server Publishing Create a Web page library as well as supporting libraries to create and publish pages based on page layouts.	Activate
Office SharePoint Server Standard Site features Features such as user profiles and search, included in the Office SharePoint Server Standard License	Activate
Team Collaboration Lists Provides team collaboration capabilities for a site by making standard lists, such as document libraries and issues, available.	Deactivate (Active)
Translation Management Library Create a translation management library when you want to create documents in multiple languages and manage translation tasks. Translation management libraries include a workflow to manage the translation process and provide sub-folders, file versioning, and check-in/check-out.	Deactivate (Active)

This is the site-level feature management page in a WSS farm where MOSS has been installed.

Much of the functionality of MOSS is enabled and disable by activating and deactivating features that have been developed by the MOSS team.

MOSS Support for WCM

- Microsoft Office SharePoint Server 2007 (MOSS) supports WCM via its Publishing features
 - One feature is scoped at site-collection level
 - Other feature scoped to site
- What do the MOSS Publishing features do?
 - Enable uploading and applying custom Alternate CCS files
 - Enable uploading and applying of Master Pages
 - Provide framework for content approval



The MOSS Approval Process

- How does the MOSS approval process work?
 - Publishing Pages created on demand by users
 - Publishing Pages are created from Page Layouts
 - Page Layouts are templates stored in MPG
 - Publishing Pages are instances stored in Pages library
 - Styles Library enabled approval for other types of files
e.g. *GIF files, JPG files, CSS files, JavaScript files, etc*



Anatomy of a MOSS Publishing site

- Publishing feature (Site Collection Level)
 - Activated once per site collection
- Publishing feature (Site Level)
 - Activated once for each site with publishing pages



Summary

- WSS Fundamentals
- Anatomy of a Team Site
- Understanding the role of CSS and Themes
- SharePoint Integration with Master Pages
- Working with the SharePoint Designer
- Understanding Features
- WCM using the MOSS Publishing Features



CSS Primer for SharePoint Designers

Working together with CSS and SharePoint



Agenda

- Fundamentals CSS concepts
- Overview of CSS rules defined in Core.CSS
- Tools for Discovering CSS
- Adding custom CSS to a master page
- Doctypes and SharePoint



Fundamentals CSS concepts

- Why is CSS important for web design?
 - Table and Font tags were popular a few years ago
 - Web design now separates design from functionality
 - Tables are better suited to tabular data
 - Should you use Table and Font tags in modern design?
- Why is CSS important with SharePoint?
 - CSS used to override default SharePoint branding
 - OOTB SharePoint uses a LOT of CSS
 - Primary **core.css** file has over 4300 lines of CSS code



How is CSS applied to HTML?

- **Inline Style**

```
<p style="color: red;">The text is red</p>
```

- **Internal Style Sheets**

```
<style type="text/css">  
  h1 { color: blue; }  
</style>
```

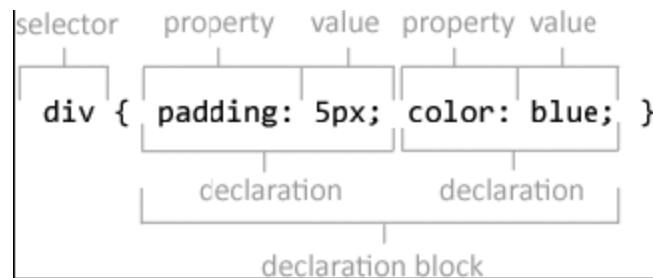
- **External Style Sheets**

```
<link href="customStyle.css" rel="stylesheet" type="text/css">
```



Style sheets are made up of Rules

- Rules consist of
 - **Selector** – What HTML element is being styled
 - **Declaration block** - Sets of style properties and values
- Declaration block can define multiple property/value pairs



- Several selectors can be grouped together
- ```
div, p, h1 { color: blue; }
```



# Types of Selectors

- Type Selectors

```
p { font-family: arial; }
```

- Class Selectors

```
.myClass { color: red; }
p.myClass { color: blue; }
```

- ID Selectors

```
<div id="myID">
#myID { color: green; }
```

- Descendent Selectors

```
<div>
 <p>Hello</p> World
</div>
```

```
<style>
div p {
 color: purple;
}
</style>
```



# Types of Selectors

- Pseudo-Classes

```
a:link {
 color: red;
}
a:visited {
 color: blue;
}
a:hover {
 color: green;
}
```

- The Universal Selector

```
* {
 margin: 0px;
 padding: 0px;
}
```



# CSS Properties

- Fonts
  - Font Family

```
font-family: Calibri, Arial, Helvetica, sans-serif;
```
  - Font Size

```
font-size: 12px;
font-size: 1em;
```
  - Color

```
color: blue;
color: rgb(0,0,255);
color: #0000FF;
```
- Text Decoration can be used to create interactivity on links

```
a {
 text-decoration: none;
}
a:hover {
 text-decoration: underline;
}
```



# CSS Properties

- Wrapping can be controlled with CSS
  - white-space: nowrap;
- Display can be used control spacing and to hide elements
  - display: block;
  - display: none;



# CSS Properties

- **Float**
  - The normal flow of a web page is from top to bottom
  - Float can remove an element from this normal flow and move it to the far left or far right

**float: right;**
- **Position**
  - By default elements have a position of static, and flow normally down the page
  - Relative Position - Causes the element to be positioned relatively based on where it normally would be in the flow
  - Absolute Position - Causes the element to be positioned absolutely based on its parent.
  - When position is set to relative or absolute you will want to set a top, bottom, left, or right value to control where the element moves.



# CSS Properties

- Backgrounds can be used to impart a lot of design change with little effort
  - Background Color  
`background-color: blue;`
  - Background Image  
`background-image: url('/images/myimage.gif');`
  - Background Repeat  
`background-repeat: repeat-x;`
- Borders can be set all in one shortcut property or they can be set per side
  - `border: 1px solid green;`
  - `border-left: 2px solid red;`
  - `border-right: 2px solid green;`
  - `border-top: 2px solid yellow;`
  - `border-bottom: 2px solid blue;`

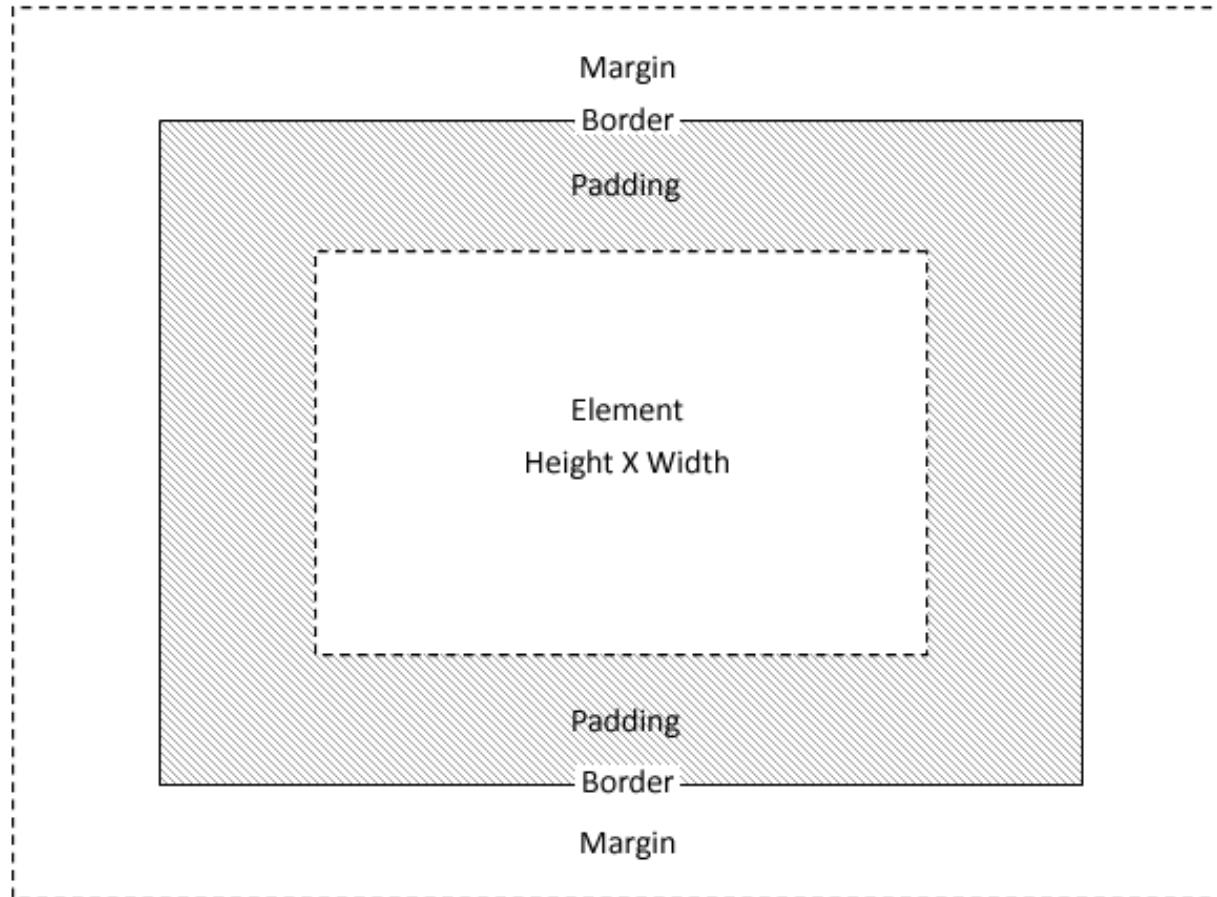


# CSS Properties

- **Padding** is the spacing between an element and its border,
  - background colors and images show in this area  
`padding-top: 1px;`
- **Margin** is the spacing past the border
  - It does not show background colors or images for the specific element
  - Note that parent backgrounds will show through  
`margin-top: 1px;`



# CSS Properties



# Inheritance in CSS

- Inheritance allows CSS values to apply to descendant elements
  - Not all of the CSS properties support inheritance
  - Typically, the ones that do are the ones that affect text styling
  - *Reference for CSS properties that support inheritance*  
<http://www.w3.org/TR/css21/propidx.html>
- **!important** rule can be really important!
  - !important rule takes precedence over standard cascade rules

```
div {
 color: red !important;
}
```



# Understanding the Cascade

1. Find all style declarations applied to the element
2. Sort by origin and importance (including !important)
3. If origin and importance is the same,
  - Specificity is used to determine what wins the cascade
  - Specificity is determined via the following equation:
$$([The\ number\ of\ ID\ selectors] \times 100) + ([The\ number\ of\ class\ selectors] \times 10) + ([The\ number\ of\ HTML\ selectors] \times 1)$$
4. Finally, if all other steps are equivalent, the rule that is declared last is the winner



# Tools for Discovering CSS

- Firebug
  - <http://getfirebug.com>
- IE Developer tools
  - Built-into IE 8
- IE Developers Toolbar
  - Free download used with IE7
- What do these allow you to do
  - Visually explore CSS class names, IDs, etc.



# Adding custom CSS to a master page

- Where should CSS live in SharePoint?
  - Style Library for MOSS
  - Your own folder or \_layouts (12 root) for WSS
- Setting an Alternate CSS URL
  - Site Actions>Site Settings>Modify All Site Settings
  - Look and Feel > Master page
- Inline and Internal style sheets can be applied in the master page or page layouts
  - `<asp:Content ContentPlaceHolderId="PlaceHolderAdditionalPageHead" runat="server">`



# Adding custom CSS to a master page

- For branding that is more advanced include it manually in the master page
  - <SharePoint:CssRegistration>

```
<SharePoint:CssRegistration
 name="<% $SPUrl:~SiteCollection/Style%20Library/zz1_blue.css%">
 runat="server"
/>
```
  - Can be problematic for overriding the OOTB styles. SharePoint tends to put it's own CSS last
- To be absolutely certain your CSS is called last, use an HTML CSS include

```
<link rel="stylesheet"
 type="text/css"

 href="<%$SPUrl:~sitecollection/Style%20Library/~language/Custom%20Styles/x.css %>">
```



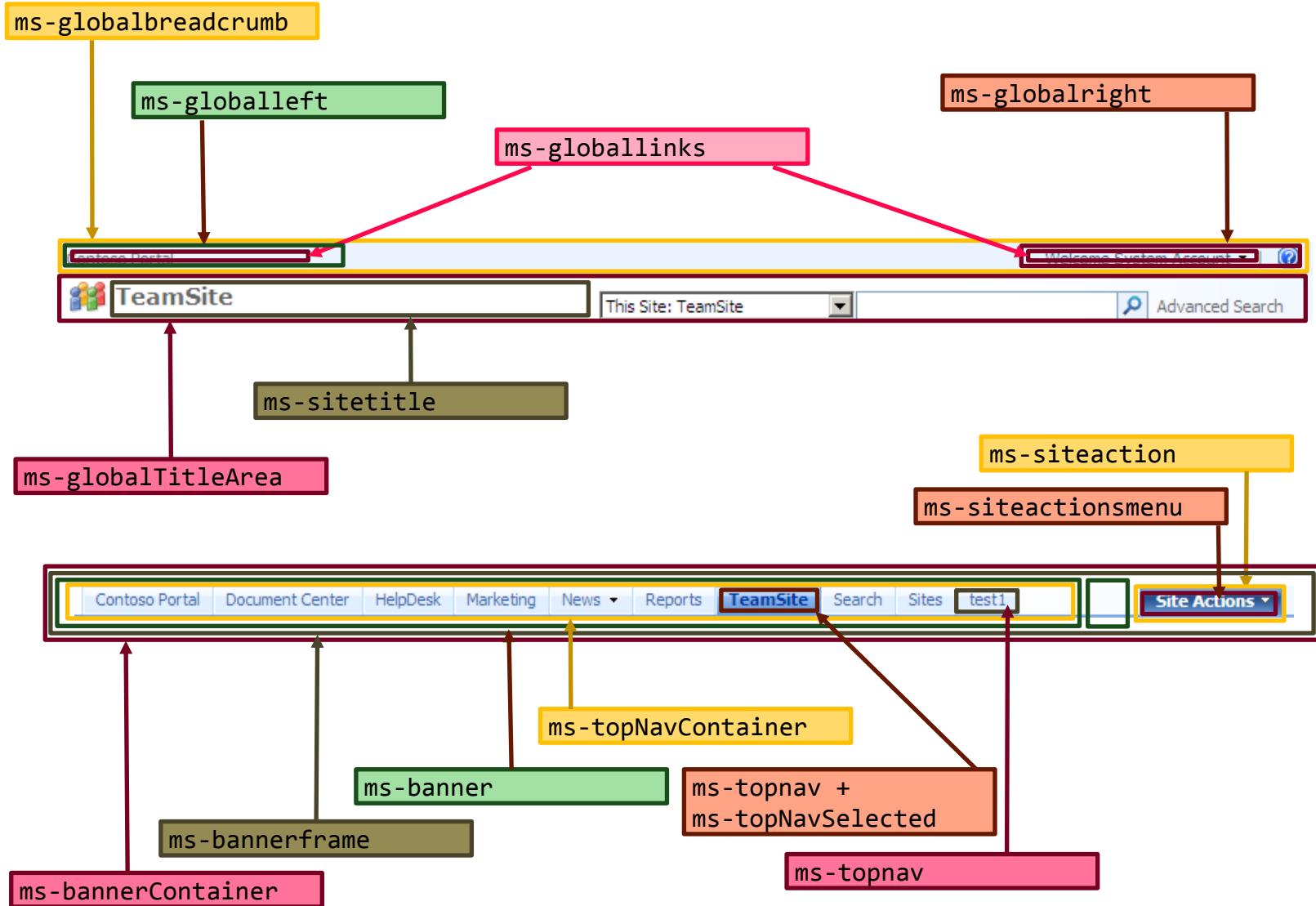
# Overview of CSS rules defined in Core.CSS

- Overview of CSS used in SharePoint

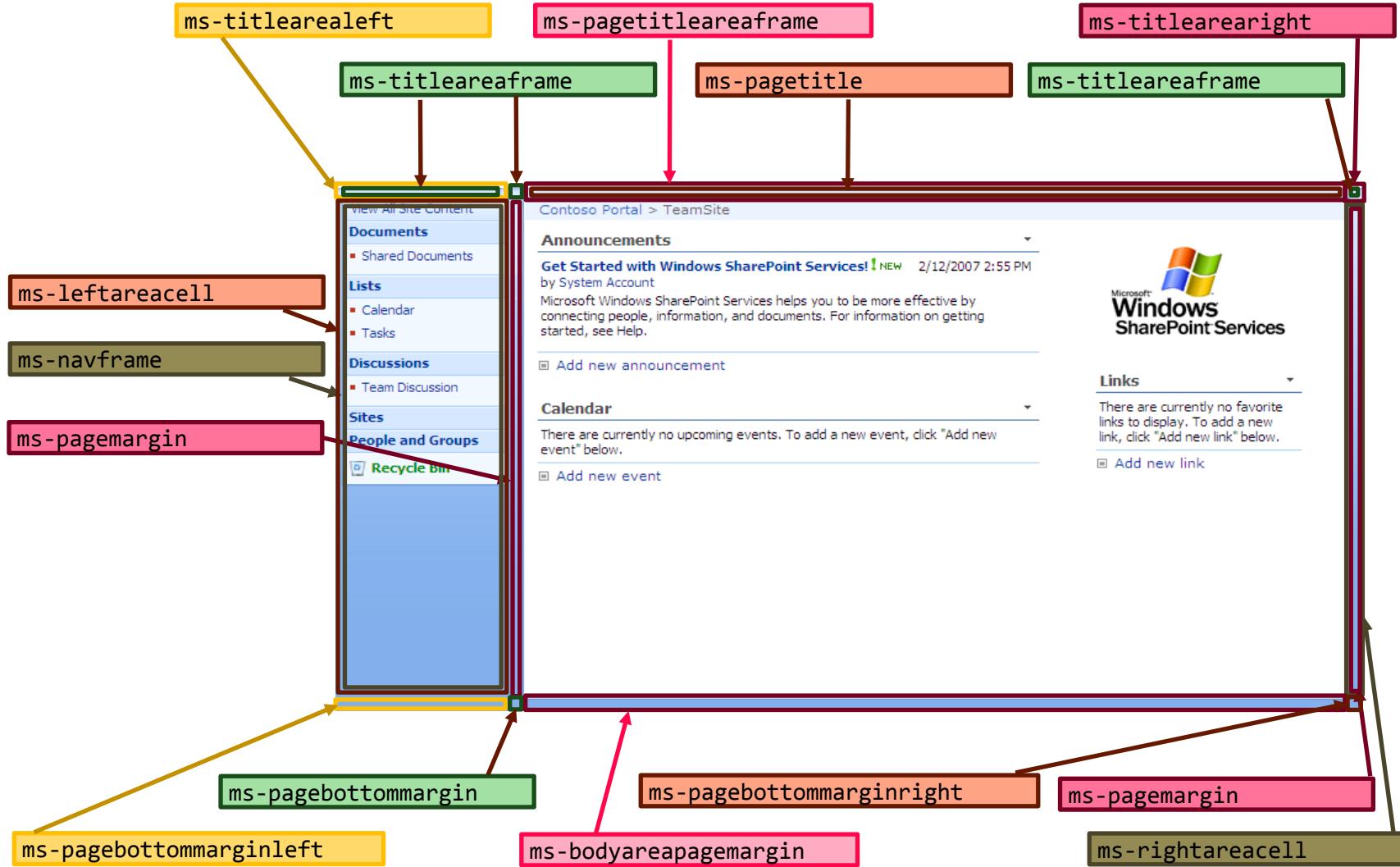
<http://msdn.microsoft.com/en-us/library/ms438349.aspx>



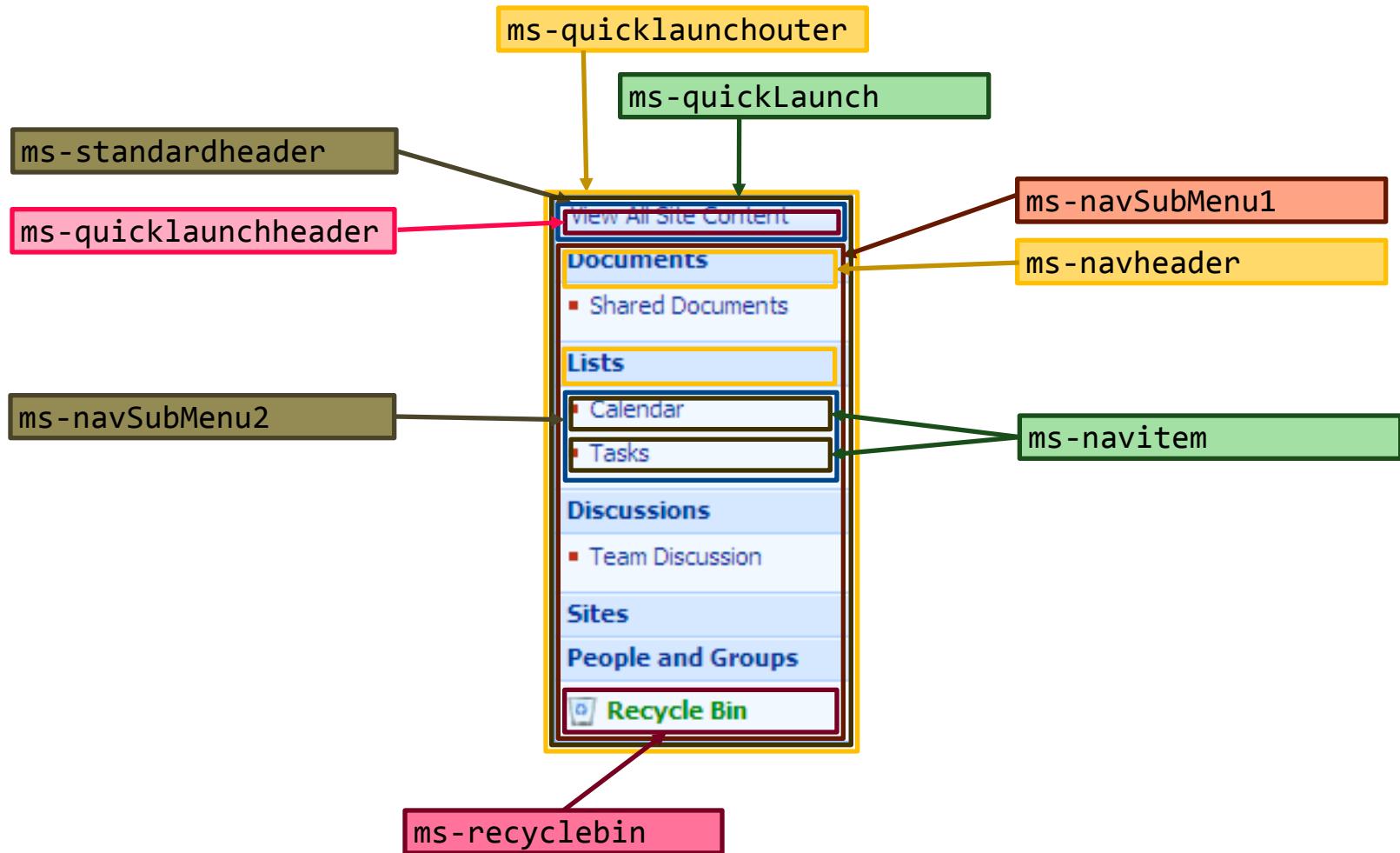
# Top Navigation Areas



# Body Structure



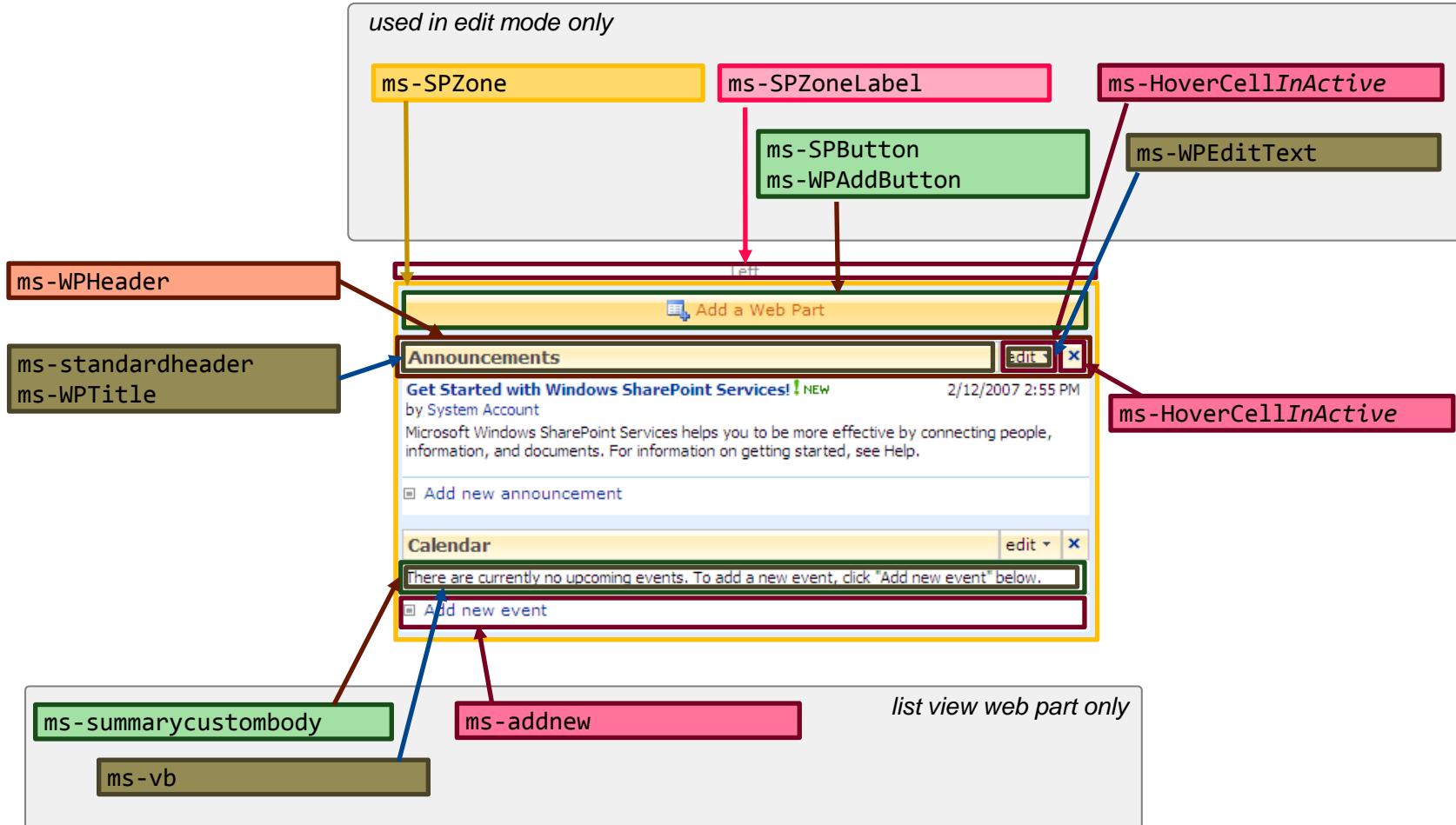
# Quick Launch



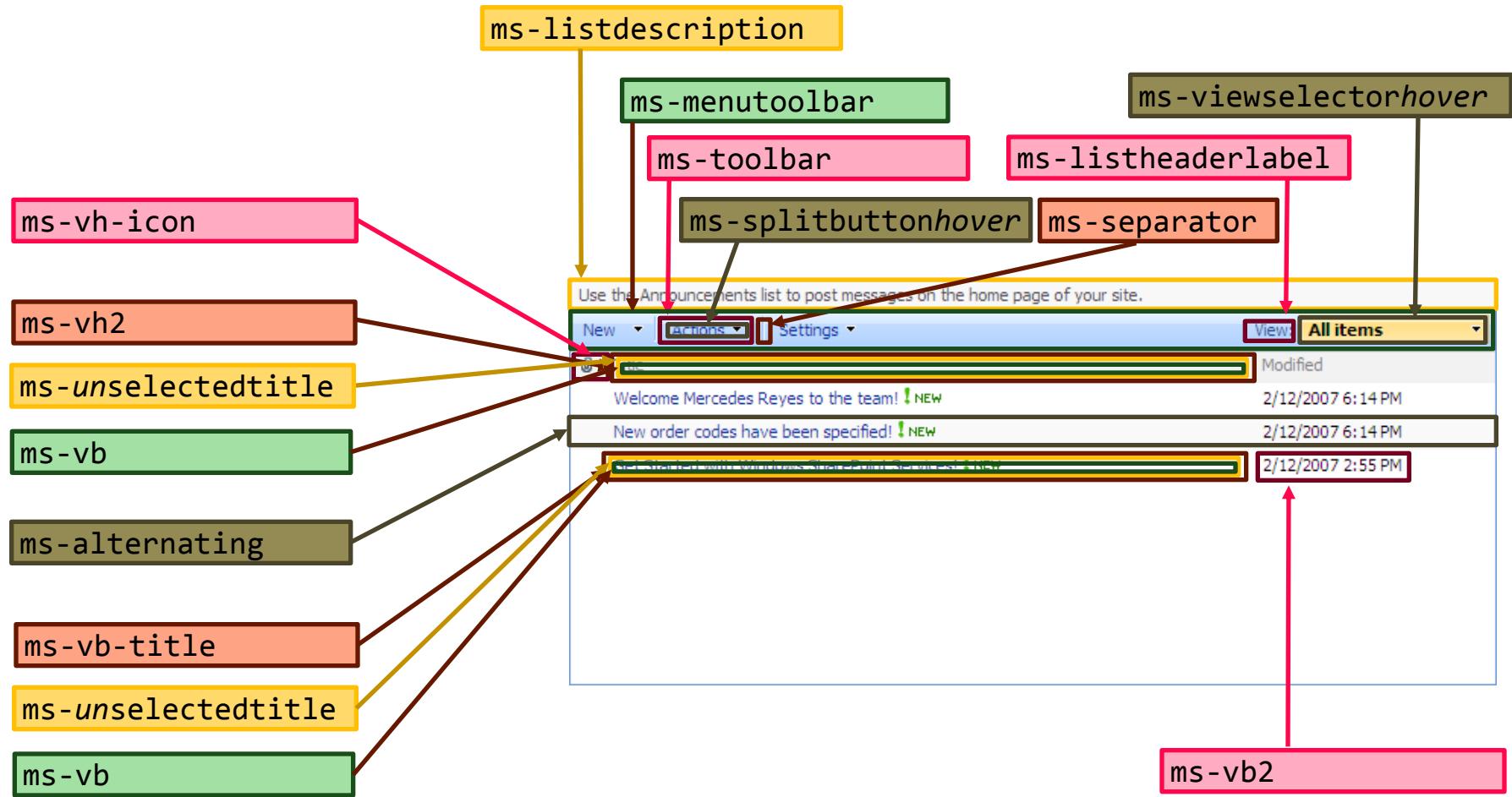
# Page Body



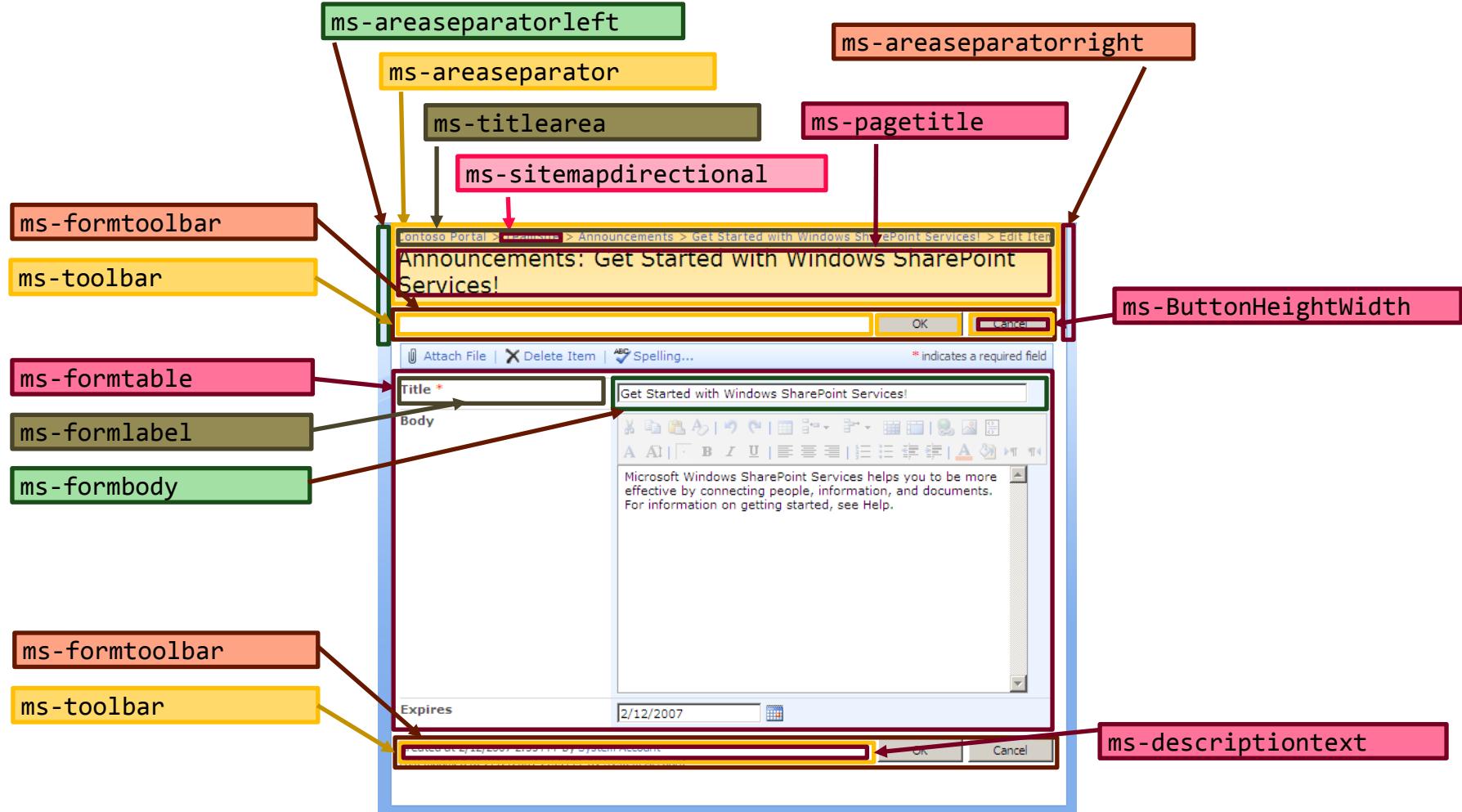
# Web Parts



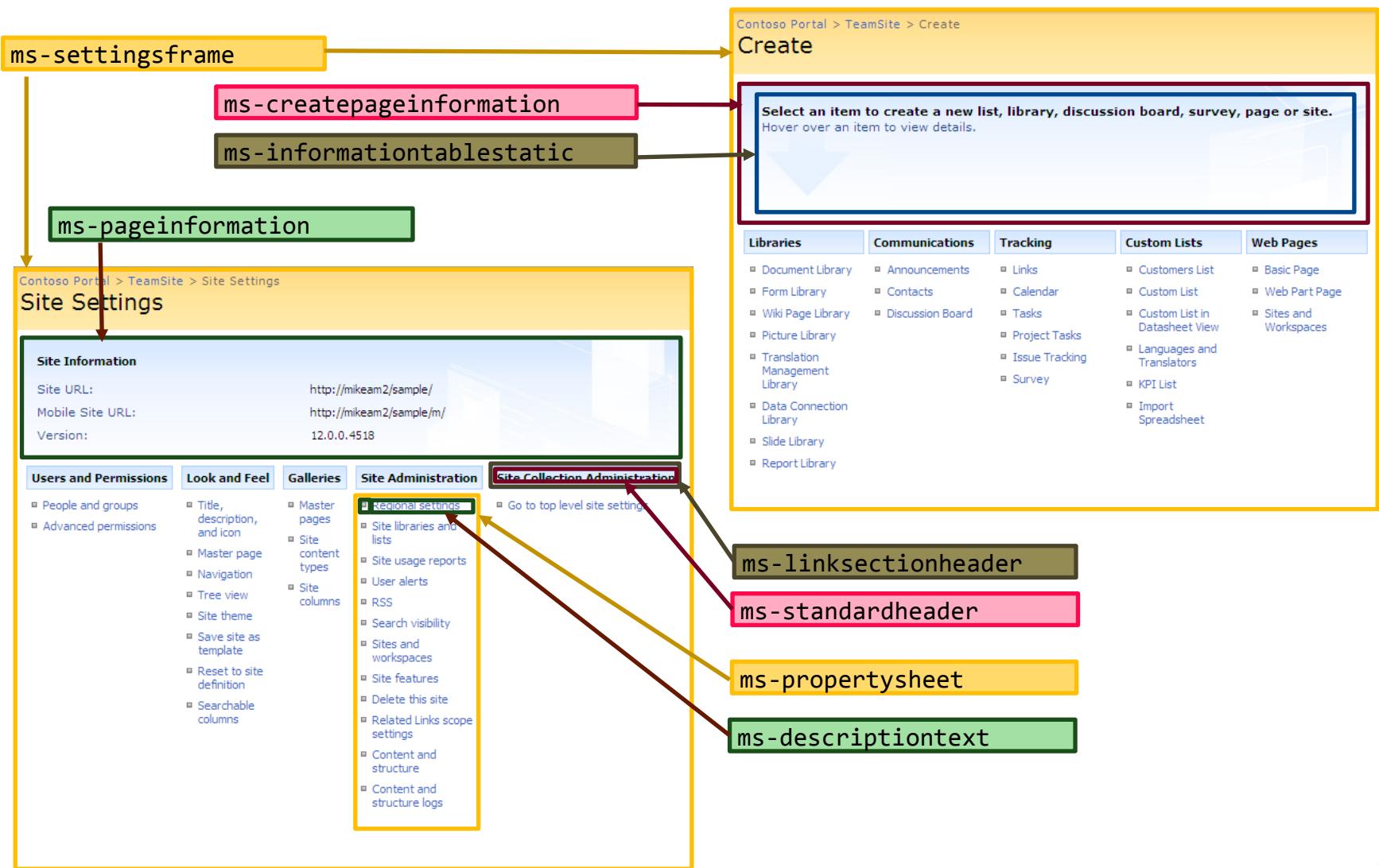
# List Views



# Forms



# Application Pages (Landing Pages)



# Application Pages (Form Pages)

The diagram illustrates the structure of an Application Page (Form Page) with various CSS classes highlighted by colored boxes and arrows:

- ms-formareaframe** (Yellow box): Points to the main container area of the page.
- ms-propertiesheet** (Dark Green box): Points to the properties sheet section.
- ms-descriptiontext** (Pink box): Points to the title and description input fields.
- ms-sectionheader** (Light Green box): Points to the section header for the logo URL.
- ms-standardheader** (Dark Green box): Points to the standard header for the URL address.
- ms-descriptiontext** (Orange box): Points to the URL description input field.
- ms-inputformdescription** (Orange box): Points to the URL description input field.
- ms-authoringcontrols** (Pink box): Points to the URL name input field.
- ms-inputformcontrols** (Pink box): Points to the URL name input field.

**Contoso Portal > TeamSite > Site Settings > Title, Description, and Icon**

## Title, Description, and Icon

**Title and Description**  
Type a title and description for your Web site. The title is displayed on each page in the site. The description is displayed on the home page.

**Logo URL and Description**  
Associate a logo with this site by entering the URL to an image file, add an optional description for the image. Note: If the file location has a local relative address, for example, /\_layouts/images/logo.gif, you must copy the graphics file to that location on each front-end Web server.

**Web Site Address**  
Users can navigate to your site by typing the Web site address (URL) into their browser. You can enter the last part of the address. You should keep it short and easy to remember.  
For example,  
`http://mikeam2/sitename`

**Title:** TeamSite  
**Description:**   
**URL:** `/_layouts/images/titlegraphic.gif`  
[Click here to test](#)  
**Enter a description (used as alternative text for the picture):**

**URL name:** `http://mikeam2/sample`

**OK** **Cancel**



# DocTypes

- What is a DocType?
  - Standard W3C instruction for browsers
  - tells browser to use specific language to interpret HTML/XML
  - pages without DocType render in Quirks mode (pre IE5.5)
- Strict versus Transitional
  - Strict prohibits legacy code (e.g. no Font tags, tags must be closed)

```
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01//EN"
"http://www.w3.org/TR/html4/strict.dtd">
```
  - Transitional allows pages with legacy code to be W3C compliant

```
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN"
"http://www.w3.org/TR/html4/loose.dtd">
```



# DocTypes and SharePoint

- What DocType does SharePoint use
  - default.master does not define a DocType
  - BlueBand.master (and its relatives) use HTML 4.01 Transitional
- SharePoint is not W3C compliant with HTML or XHTML
- Tools for checking W3C compliance
  - <https://addons.mozilla.org/en-US/firefox/addon/249>



# Browsers and Support

- All modern browsers support CSS styling though they sometimes handle CSS slightly differently
- Testing in all of your target browsers is crucial
  - For testing old versions of IE use IETester or SuperPreview

<http://www.my-debugbar.com/wiki/IETester/HomePage>

<http://expression.microsoft.com/en-us/dd565874.aspx>



# Summary

- Fundamentals CSS concepts
- Overview of CSS rules defined in Core.CSS
- Tools for Discovering CSS
- Adding custom CSS to a master page
- Doctypes and SharePoint



# **Themes**

Creating Themes in SharePoint



# Agenda

- What are Themes?
- Applying a Theme to a SharePoint site
- Themes behind the scenes
- Creating your own Theme
- Modifying your Theme
- Theme Tips and Tricks



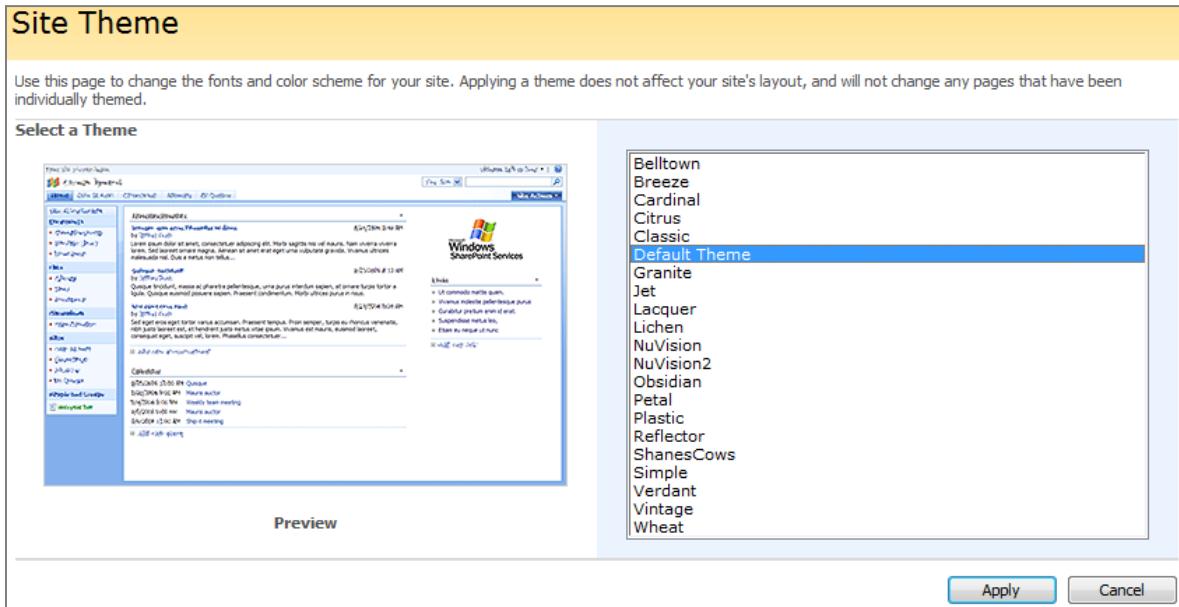
# What are Themes?

- Simple styling and branding for WSS and MOSS
  - While master pages can change the actual “layout” of a site, Themes can only change CSS and background images
- Apply styling to all of one particular SharePoint site
  - Including Application pages (/layouts)
  - Master pages do not style Application pages
- Can be used along with master pages



# Applying a Theme to a SharePoint site

- MOSS
  - Site Actions > Site Settings > Modify All Site Settings  
Look and Feel > Site Theme
- WSS
  - Site Settings > Site Theme



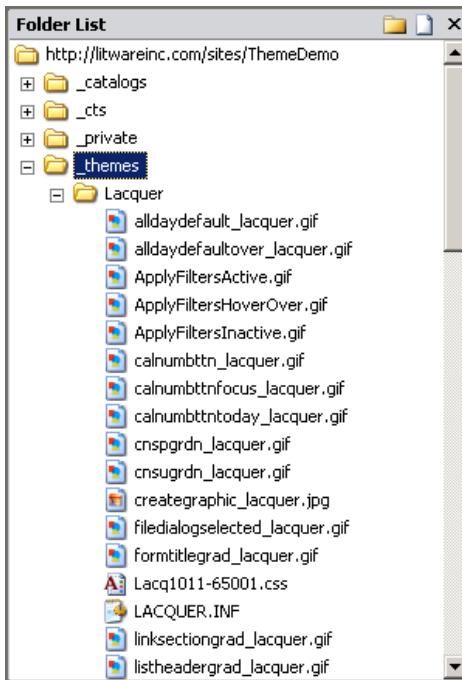
# Applying a Theme to a SharePoint site

## Site with Lacquer Theme applied

The screenshot shows a SharePoint site named "ThemeDemo" in a Windows Internet Explorer window. The browser title bar reads "Home - ThemeDemo - Windows Internet Explorer". The address bar shows the URL "http://litwareinc.com/sites/ThemeDemo/default.aspx". The SharePoint navigation bar includes links for "View All Site Content", "Documents" (with "Shared Documents"), "Lists" (with "Calendar" and "Tasks"), "Discussions" (with "Team Discussion"), "Sites", "People and Groups", and "Recycle Bin". The main content area displays the "Announcements" section, featuring a single item titled "Get Started with Windows SharePoint Services!" posted by "Litware Admin Guy" on "8/25/2008 10:38 PM". Below the announcement is a link to "Add new announcement". The "Calendar" section indicates "There are currently no upcoming events. To add a new event, click "Add new event" below." A link to "Add new event" is also present. On the right side of the page, there is a "Links" section stating "There are currently no favorite links to display. To add a new link, click "Add new link" below." A link to "Add new link" is provided. The SharePoint logo and the text "Microsoft Windows SharePoint Services" are visible in the center-right of the page. The bottom status bar of the browser shows "Done", "Trusted sites", and "100%".

# Applying a Theme to a SharePoint site

- What happens when a Theme is applied?
  - Files provisioned in site at “\_themes/Lacquer”
  - mossExtension.css is added to the end of theme.css and a new Theme file is created “Lacq1011-65001.css”



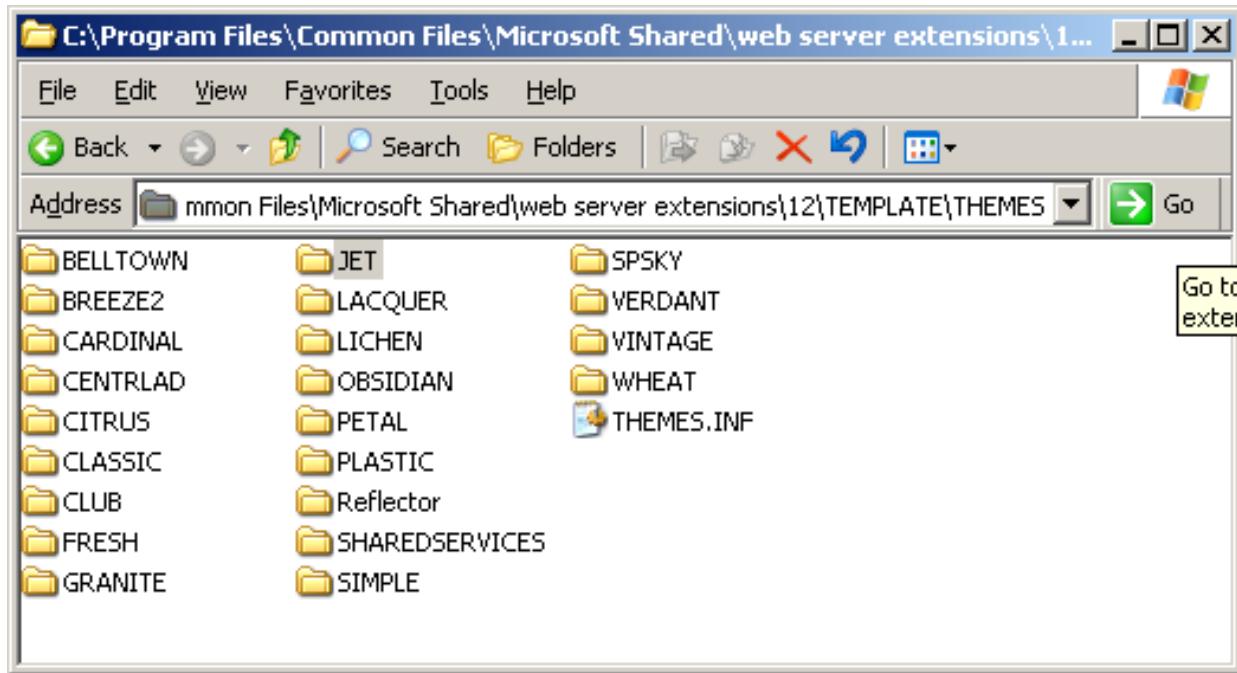
# How Master Pages Refer to Themes

- Master pages refer to Themes in the <head>  
`<SharePoint:Theme runat="server"/>`
- If that tag is excluded, MOSS will still add a meta tag to the end of the <head>  
`<meta name="Microsoft Theme" content=?Lacquer 1011, default>`
- Forcing a master page to NOT load Themes
  - <http://blog.drisgill.com/2008/08/disabling-themes-on-custom-master-pages.html>



# The Themes Folder

- Themes Folder is located in the 12 Folder
  - C:\Program Files\Common Files\Microsoft Shared\web server extensions\12\TEMPLATE\THEMES



# The Theme INF File

- LACQUER.INF

```
[info]
```

```
title=Lacquer
codepage=65001
version=3.00
format=2.00
readonly=true
refcount=0
```

```
[titles]
```

```
1031=Lacquer
```

```
...
```



# Other Files in the Theme Folder

- theme.css
  - Most of the CSS for the Theme
- mossExtension.css
  - Extra CSS applied to the end of the Theme CSS for MOSS sites
- Supporting images and CSS



# SPTHMES.XML

- Contains references to all Themes for SharePoint
- Located in the 12 Folder:
  - C\Program Files\Common Files\Microsoft Shared\web server extensions\12\TEMPLATE\LAYOUTS\1033\SPTHMES.XML

```
<Templates>
 <TemplateID>Lacquer</TemplateID>
 <DisplayName>Lacquer</DisplayName>
 <Description>Lacquer has a gray background with gray control areas and
orange highlights.</Description>
 <Thumbnail>images/thlacquer.gif</Thumbnail>
 <Preview>images/thlacquer.gif</Preview>
</Templates>
```



# **Thumbnail / Preview Images**

- Thumbnail and preview images are located in the 12 Folder:
  - C:\Program Files\Common Files\Microsoft Shared\web server extensions\12\TEMPLATE\IMAGES
- OOTB Thumbnails are named “th\*.gif”
- Can be GIF, JPG, or PNG



# Creating your own Theme

- Copy an OOTB Theme that is a similar design
  - Make a copy of the SIMPLE folder
- Name the folder and .INF file the same (“WingTip” your new Theme name)
  - Alpha-Numeric only, no special characters or spaces



# Creating your own Theme

- Edit WINGTIP.INF file and replace all instances of OOTB Theme name (Simple) with your Theme name (WingTip)

```
[info]
title=WingTip
codepage=65001
version=3.00
format=3.00
readonly=true
refcount=0
```

```
[titles]
1031=WingTip
```

...



# Creating your own Theme

- Edit SPTHEMES.XML, add an entry for your new Theme before </SPTemplates>

```
<Templates>
 <TemplateID>WingTip</TemplateID>
 <DisplayName>WingTip</DisplayName>
 <Description>Theme for WingTip Inc.</Description>
 <Thumbnail>images/th_wingtip.gif</Thumbnail>
 <Preview>images/th_wingtip.jpg</Preview>
</Templates>
```



# Creating your own Theme

- Add a placeholder preview thumbnail to  
  \12\TEMPLATE\IMAGES
  - Replace later with an actual screenshot
- Make a small change to theme.css



# Creating your own Theme

- Run iisreset /noforce
  - Obviously you will want to not do this on production until you are ready
- Browse to your SharePoint site and select and apply the new Theme
  - Site Actions > Site Settings > Modify All Site Settings | Look and Feel > Site Theme



# Modifying your Theme

- Open the site in SharePoint Designer
- Navigate to \_themes > WingTip
- Open Wing1011-65001.css and make some changes
- Add or change images in the \_themes > WingTip folder
- Your changes appear immediately after browser refresh
  - Much nicer than changing the Theme folder in the 12 and doing an IISRESET and re-applying the Theme



# Modifying your Theme

- When you are happy with your changes move your CSS and images back to the 12 Folder in order to make them permanent
  - Know that your changes are not permanent until this happens, reapplying the old theme and running IISRESET could blow away your changes
- Run iisreset /noforce
- Reselect and apply your Theme from the browser



# Theme Tips and Tricks

- Strange errors
  - "Write Error on file \_themes\"  
Check for non typical file or folder names in the Theme folder (look for backup folders)
- Importing Theme CSS
  - Allows for easier maintenance, no need to ResetIIS or re-apply Theme
  - Slightly more complicated structure and references
  - Add an import statement to the theme.css file

```
@import "/_layouts/1033/styles/WingTip/theme.css";
```

<http://www.heathersolomon.com/blog/archive/2008/01/30/SharePoint-2007-Design-Tip-Import-your-CSS-for-SharePoint-Themes.aspx>



# Theme Tips and Tricks

- IE Developers Toolbar

<http://www.microsoft.com/downloads/details.aspx?FamilyId=E59C3964-672D-4511-BB3E-2D5E1DB91038&displaylang=en>

- Firebug - <http://getfirebug.com>

- Both allow visual inspection of applied CSS,  
Firebug allows you to manipulate the CSS in real time



# Deploying Themes

- Automatic deployment
  - <http://solutionizing.net/2008/07/09/updating-spthemesxml-through-a-feature/>
- Feature stapling adds the Theme to the Site Definition so that the Theme is added when a new site is created
  - <http://ablog.apress.com/?p=1367>



# Summary

- What are Themes?
- Applying a Theme to a SharePoint site
- Themes behind the scenes
- Creating your own Theme
- Modifying your Theme
- Theme Tips and Tricks



# **Master Pages in WSS**

Exploring the default.master file



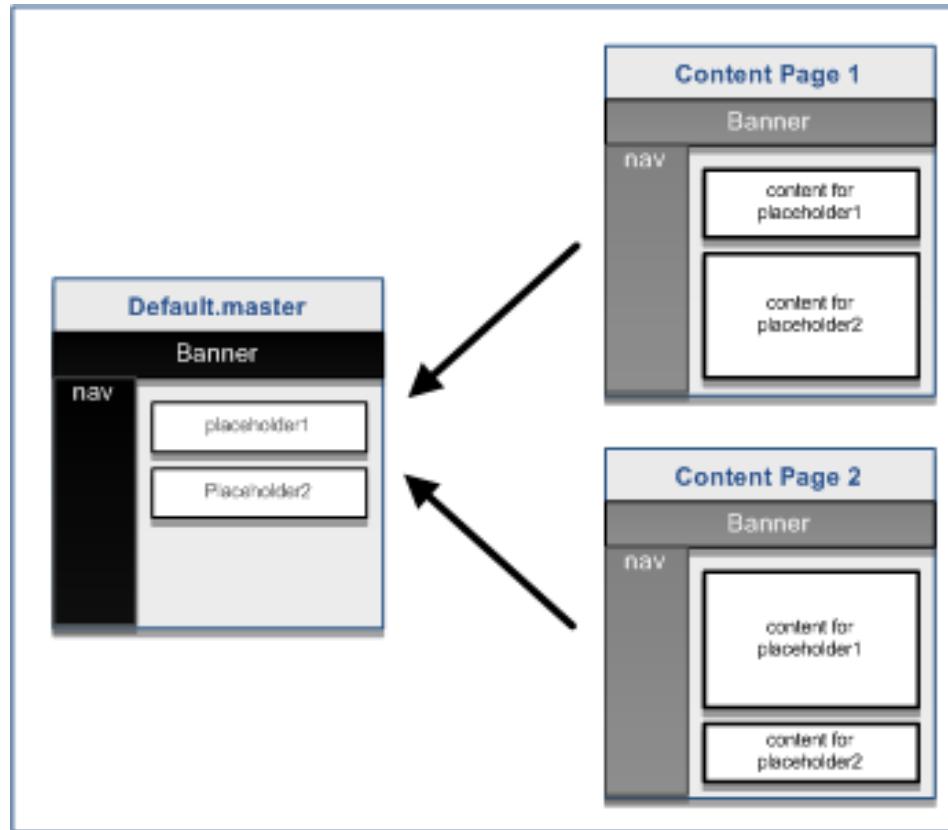
# Agenda

- Overview of ASP.NET syntax used with Master Pages
- Understanding default.master
- Customizing Master Pages using the SharePoint Designer
- Overriding standard PlaceHolders from default.master



# ASP.NET Background: Master Pages

- ASP.NET 2.0 introduces Master Pages
  - Defines common layouts used across content pages



# ASP.NET Background: Master Pages

- Content Placeholders on Master Pages allow content to be overridden from content pages

## Master Page:

- <asp:ContentPlaceHolder id="PlaceHolderMain" runat="server" />

## Content Page:

- <asp:Content runat="server" ContentPlaceHolderID="PlaceHolderMain">

- If a content page refers to a placeholder that doesn't exist on the master page an error will be thrown



# ASP.NET Background: Master Pages

- User Controls (.ascx) and Server Controls (dll) are like self contained content and functionality widgets

```
<%@ Register TagPrefix="wingTip" TagName="widget"
Src="widgetPanel.ascx" %>
```

```
<wingTip:widget runat="server" />
```



# ASP.NET Background: Master Pages

- Demo: ASP.NET Master Page



# Master Pages in SharePoint

- Master pages allow you to change the look and feel for an entire site simply by making changes to a single file
  - Unlike themes, Master Pages allow full control over the HTML of the page
- Can't have a SharePoint site without it – even if you use a theme!



# OOTB Master Pages

The image displays two side-by-side screenshots of SharePoint websites, illustrating the use of Out-of-the-Box (OOTB) master pages.

**Left Site (Team Site):**

- Header:** Welcome MOSS-RD1\administrator | My Site | My Links | Site Actions
- Page Title:** Team
- Navigation:** Home, test, Sub Site
- Left Navigation Bar:** View All Site Content, Documents (Shared Documents), Lists (Calendar, Tasks), Discussions (Team Discussion), Sites (Sub Site), People and Groups (Recycle Bin).
- Announcements:** Test (by MOSS-RD1\administrator, 9/4/2008 3:04 PM). Description: This is a test of the emergency broadcast system. Action: Add new announcement.
- Site Image:** Microsoft Windows SharePoint Services logo.

**Right Site (RD Home Site):**

- Header:** My Site | My Links | Welcome System Account | Site Actions
- Page Title:** RD Home
- Navigation:** Press Releases, Search bar.
- Content Area:** RD Home banner featuring four people working together. Below the banner:
  - Enable anonymous access:** You must enable anonymous access on the site collection for the forms authentication logon page to work from Office SharePoint Server. Contact your administrator to have anonymous access enabled in Central Administration and IIS.
  - Manage navigation:** Change the navigation links in this site.
  - Go to master page gallery:** Change the page layouts and master page of this site collection.
  - Manage site content and structure:** Reorganize content and structure in this site collection.
  - Set up multilingual support:** Use the variations feature to manage multi-lingual sites and pages.
  - Add users to the Approvers and Meters group:** Users in the Approvers group can approve pages, images, and documents in this site. Users in the Meters group can create and edit pages, and they can upload images and documents, but they cannot publish the pages, images, or documents. Workflow is enabled in the Pages library, and content approval is enabled in the Documents and Images libraries.



# Custom Master Pages

The image displays three distinct website interfaces, each utilizing a custom master page design:

- Adventure Works:** This travel-oriented site features a large header image of a tropical island. The navigation bar includes links for Home, Destination Guides, Trip Planner, News/Events, Calendar, Blogs, Galleries, and Contact Us. A search bar at the top right is powered by Bing. The main content area is titled "TOP DESTINATIONS" and contains placeholder text about travel destinations. On the left, there's a sidebar for "RELATED LINKS" with four items and a "TRIP PLANNER" section showing a world map.
- Penn Nursing Science:** This academic website has a dark blue header with the university logo. The main title is "Care to Change the World." Below it, a woman in a lab coat is shown. The navigation menu includes About Penn Nursing, Admissions, Academic Programs, Faculty & Staff, Research, Practice & Community, Resources, Giving, Global Health Affairs, and Diversity. A sidebar on the right is titled "From the Dean" and features a photo of a woman holding a globe.
- Orange County Public Schools:** This site has a green header with the OCPS logo. The main navigation menu includes Home, Departments, Employment, Find a School, Records, School Board, Superintendent's Office, and OCPS Polls. The content area features sections for Latest OCPS News (with a photo of a teacher), Important Information (including 2009 FCAT Results and 2009-10 School start times), Orlando Weather (with a weather forecast from NBC 6), and District Calendar (showing June 2009 dates). A sidebar on the left highlights a "Finalist for State Teacher of the Year" named Melissa Reiker.

Adventure Works MSDN Article: <http://bit.ly/RealWorldBranding>



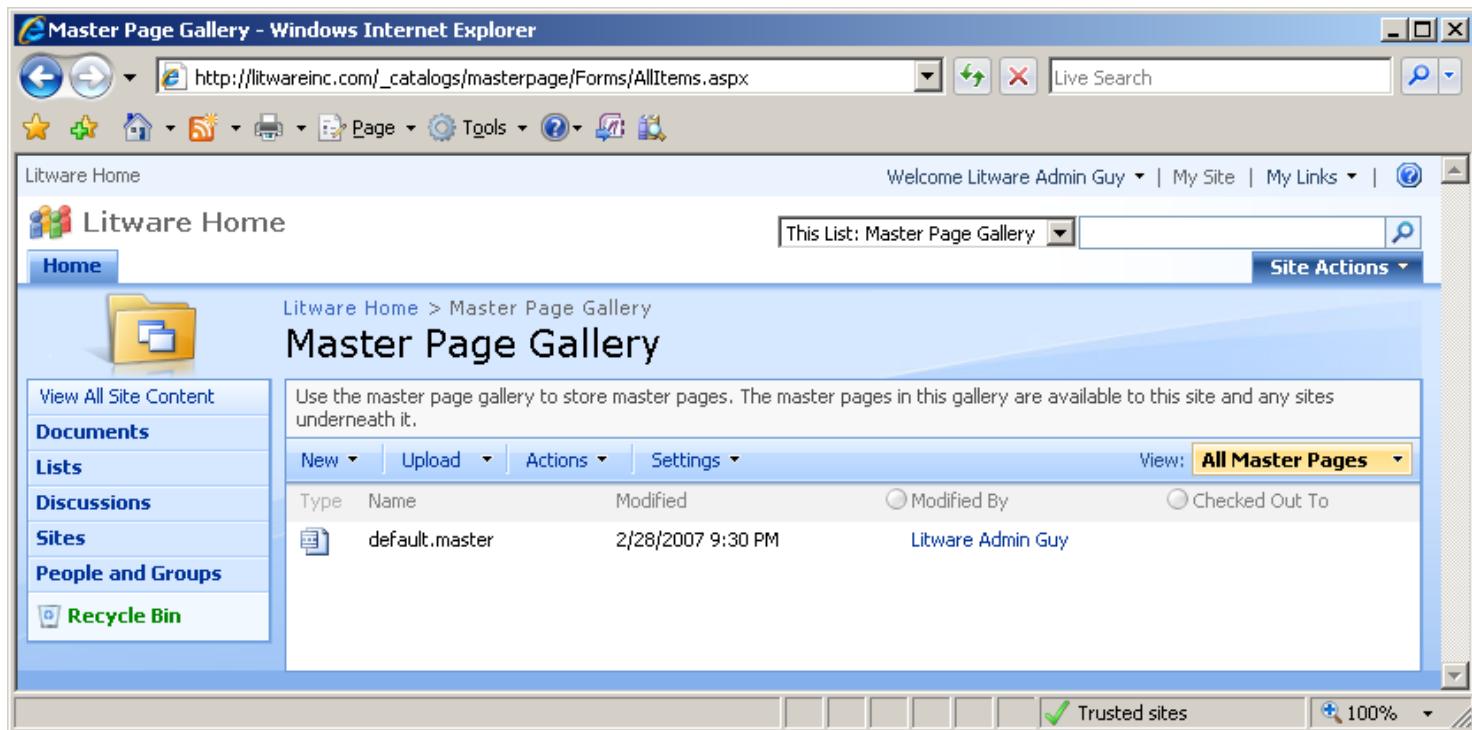
# Master Pages in WSS

- Application pages use application.master
  - Farm-wide master page
  - Cannot be customized on per-site basis
- Site Pages use default. master by default
  - default.master is a page template
  - default.master instance created in Master Page Gallery
  - default.master can be customized on per-site basis
  - default.master can be replaced with different template



# The Master Page Gallery

- Each site has a Master Page Gallery
  - Instance of default.master automatically provisioned
  - default.master can be customized on per-site basis



# SharePoint Functional Elements

When you are making your own master page you can decide what elements to include

The screenshot shows the Microsoft SharePoint Server 2007 homepage. Several functional elements are highlighted with red circles:

- Top Navigation Bar:** Circles point to the "CollabPortal" logo, the "CollabPortal" title bar, the "Document Center", "News", "Reports", "Search", and "Sites" menu items.
- User Profile Area:** Circles point to the "Welcome JROSSVM\Administrator" message, the "My Site" link, and the "My Links" link.
- Search Bar:** Circles point to the "All Sites" dropdown, the search icon, and the "Advanced Search" link.
- Site Actions:** Circles point to the "Site Actions" button.
- Left Navigation Column:** A large circle highlights the entire column containing:
  - "View All Site Content"
  - Document Center**
  - News**
    - Sample News Article
    - News Archive
  - Reports**
  - Search**
  - Sites**
  - Site Hierarchy**
    - Document Center
    - News
    - Reports
    - Search
    - Sites
      - Documents
      - Form Templates
      - Images
      - Site Collection Document
      - Site Collection Image
    - Style Library
    - Contacts
    - Content and Structure
    - Events
    - Links
    - Pages**
    - Reusable Content
    - Tasks
    - Workflow Tasks
  - Recycle Bin
- Welcome Message:** Circles point to the "Welcome to Microsoft® Office SharePoint® Server 2007" heading and the "Get started with the new version of Microsoft Office SharePoint Server 2007:" text.
- Site and Content Management:** Circles point to the "Site and Content Management" section and its bullet points.
- Business Solutions:** Circles point to the "Business Solutions(requires Enterprise License)" section and its bullet points.
- News Section:** Circles point to the "News" heading and the "Sample Link 1", "Sample Link 2", and "Sample Link 3" items.
- Right Sidebar:** Circles point to the "I need to..." dropdown, the "Choose task" button, the "Employee Lookup" dropdown, and the "Top Sites" dropdown.



# **Default.master Demo**

- Review default.master looking at the functional elements



# Delegate Controls

- Delegate Controls live in default.master and allow for substitution based on custom Feature code

```
<SharePoint:DelegateControl runat="server"
ControlId="SmallSearchInputBox"/>
```



# Custom Master Pages

- Creating a Master Page
  - One option is to use default.master as a starting point
  - Make changes to suit your tastes
- Apply custom WSS Master Pages with SharePoint Designer
  - Right-click on Master Page and choose:  
Set as Default (or Custom Master) Page



# Content Placeholders

## All Content Placeholders:

Content placeholder	Description
PlaceHolderBodyAreaClass	Additional body styles in the page header
PlaceHolderBodyLeftBorder	Border element for the main page body
PlaceHolderBodyRightMargin	Right margin of the main page body
PlaceHolderCalendarNavigator	Shows a date-picker for navigating in a calendar when a calendar is visible on the page
PlaceHolderFormDigest	The "form digest" security control
PlaceHolderGlobalNavigation	The global navigation breadcrumb
PlaceHolderHorizontalNav	Top navigation menu for the page
PlaceHolderLeftActions	Bottom of the left navigation area
PlaceHolderLeftNavBar	Left navigation area
PlaceHolderLeftNavBarBorder	Border element on the left navigation bar
PlaceHolderLeftNavBarDataSource	Data source for the left navigation menu
PlaceHolderLeftNavBarTop	Top of the left navigation area
PlaceHolderMain	Main content of the page



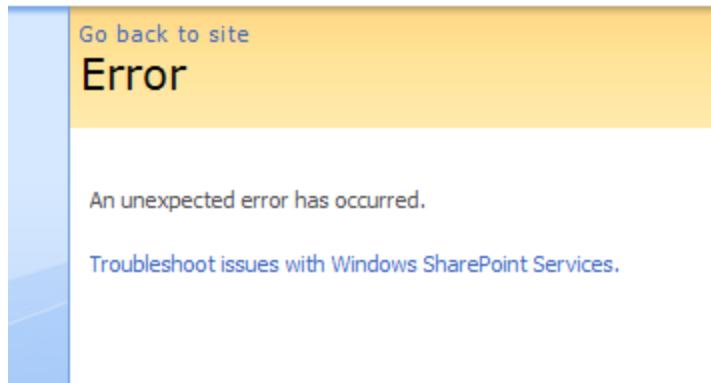
# Content Placeholders

Content placeholder	Description
PlaceHolderMiniConsole	A place to show page-level commands, for example, WIKI commands such as Edit Page, History, and Incoming Links
PlaceHolderNavSpacer	The width of the left navigation area
PlaceHolderPageDescription	Description of the page contents
PlaceHolderPageImage	Page icon in the upper-left area of the page
PlaceHolderSearchArea	Search box area
PlaceHolderSiteName	Site name
PlaceHolderTitleAreaClass	Additional styles in the page header
PlaceHolderTitleAreaSeparator	Shows shadows for the title area
PlaceHolderTitleBreadcrumb	Main content breadcrumb area
PlaceHolderPageTitleInTitleArea	Page title shown immediately below the breadcrumbs
PlaceHolderTitleLeftBorder	Left border of the title area
PlaceHolderTitleRightMargin	Right margin of the title area
PlaceHolderTopNavBar	Top navigation area



# Creating Pages using default.master

- If you delete a required Content Placeholder the master page will error



- See full error message:
  - <http://vspug.com/michael/2007/06/28/sharepoint-under-the-hood-see-real-error-description-and-callstack-stack-trace/>



# Creating Pages using default.master

- To hide Content Placeholders that aren't in use a hidden Panel:

```
<asp:Panel visible="false" runat="server">
 <asp:ContentPlaceholder
 ID="PlaceHolderNavSpacer" runat="server"/>
</asp:Panel>
```



# Content Pages in WSS

- Just like pages in ASP.NET they have `<asp:Content>` tags that override Content Placeholders in the Master Page

```
<asp:Content
ContentPlaceholderId="PlaceHolderMain"
runat="server">
```



# Minimal WSS Master Page Demo

- Learn how to...
  - Begin with minimal WSS master page
  - Use SharePoint controls
  - Use / Hide Content PlaceHolders



# Summary

- Understanding default.master
- SharePoint Controls
- Content Placeholders



# **Designing a Brand for Publishing Portals**



# Agenda

- Understanding the MOSS Publishing features
- Overview of Page Layouts and the Pages library
- Designing page layouts using content types and field controls
- Uploading CSS files and images to the Style Library



# MOSS WCM Features

- Branding
  - Define the look, feel, and navigation of the site
- Decentralized Authoring
  - Allow users to easily create and contribute content
- Workflow/Scheduling
  - Supervisors approve content before it is posted.
- Data Integrity
  - Enforce validation of content structure for publishing
  - Ensure content published/removed in timely manner



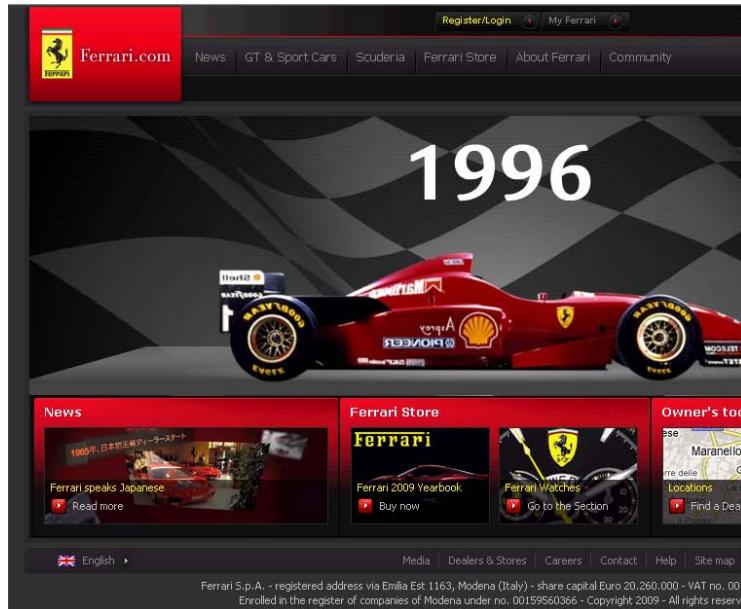
# Benefits of MOSS for Web Sites

- Better web publishing experience with more robust Rich Text Editing
- Ability to templatize the design with both master pages and page layouts
- Better control over out of the box (OOTB) navigation
- Empowers your content authors to manage their own web pages and frees up your IT staff to work on custom functionality



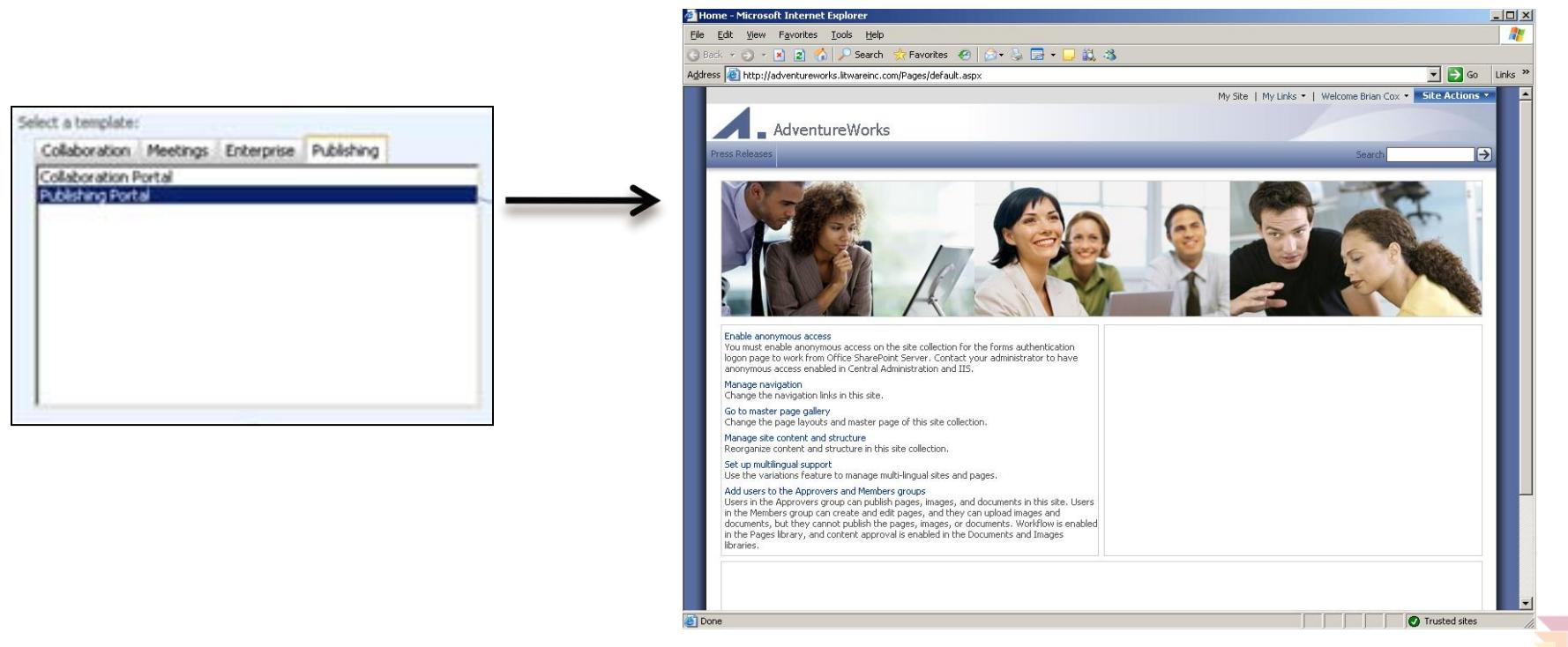
# How far can SharePoint Go?

- List of Many Public SharePoint Sites:  
<http://www.wssdemo.com/Pages/websites.aspx>



# Creating A Publishing Portal

- Creating with Central Administration
  - Create a site collection based on Publishing Portal

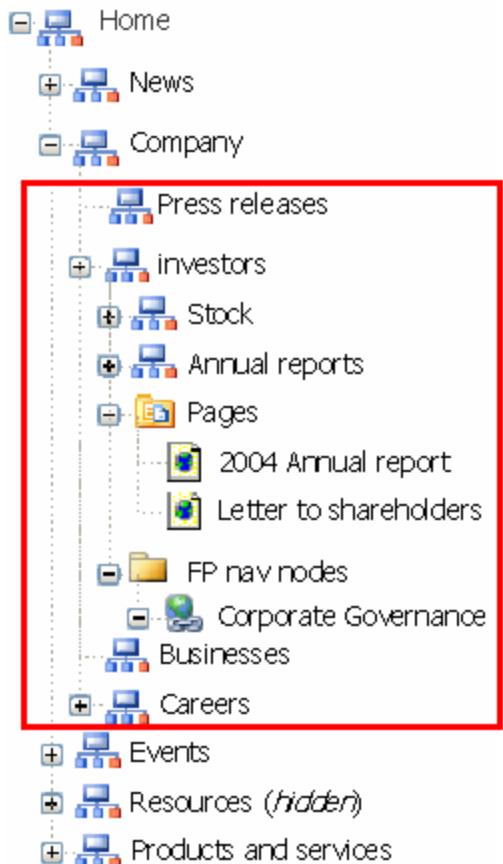


# Site Hierarchy

- In the past a lot of confusion
  - Windows SharePoint Services 2003 → sites
  - SharePoint Portal Server 2003 → areas
  - Content Management Server 2002 → channels
- In SharePoint 2007 everything is a site



# Navigation



- Dynamic navigation based on site hierarchy
- Includes webs, pages and authored links
- Navigation links trimmed based on security, workflow state and publishing schedule



# Manual Navigation Settings

- Navigation can be changed manually as well

The screenshot shows a software interface for managing navigation. At the top, there's a toolbar with buttons for Move Up, Move Down, Edit..., Delete, Add Heading..., and Add Link.... Below the toolbar, there are two main sections: "Global Navigation" and "Current Navigation". Both sections contain three items: "Press Releases", "Search (Hidden)", and "Test". Each item has a small icon next to it. In the "Selected Item" panel at the bottom, the "Title" is set to "Global Navigation". The "Type" is listed as "Container".

Section	Item	Type
Global Navigation	Press Releases	Link
	Search (Hidden)	Link
	Test	Link
Current Navigation	Press Releases	Link
	Search (Hidden)	Link
	Test	Link

**Selected Item**

**Title:** Global Navigation

**URL:**

**Description:**

**Type:** Container

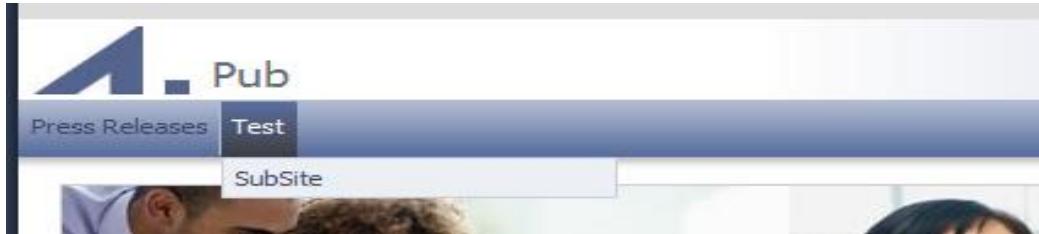


# Navigation Settings

- Custom Master Pages can control the top and side navigation fly-outs
  - **StaticDisplayLevels** – The number of levels of sub navigation to show by default
  - **MaximumDynamicDisplayLevels** – The number of levels of sub-navigation to show as fly-outs
  - **Orientation** – Can be horizontal for top navigation or vertical for side navigation
- <http://blogs.msdn.com/ecm/archive/2007/02/10/moss-navigation-deep-dive-part-1.aspx>



# Navigation Settings



- Controlled by the Master Page

```
<SharePoint:AspMenu
ID="GlobalNav"
Runat="server"
DataSourceID="SiteMapDataSource1"
Orientation="Horizontal"
StaticDisplayLevels="1"
MaximumDynamicDisplayLevels="1"
```

...



# Navigation Demo

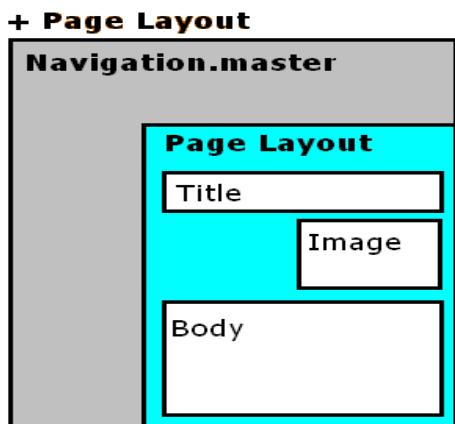
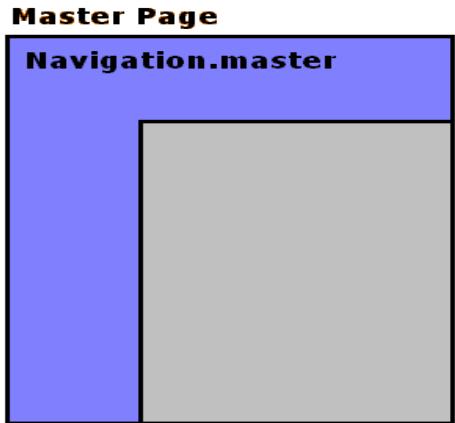


# **Page = Master Page + Page Layout**

- Master page defines the outer shell of the design
- Each publishing page is associated with a page layout
  - They now live in the Pages library
- Think of it as a template for page content
- Only available in MOSS Publishing
- Possible scenario
  - 1-3 Master pages
  - 10-25 Page Layouts
  - 10s of 1000s of Content Pages



# Page = Master Page + Page Layout



**= Rendered Page**



# Page Layouts

- Overrides the Content Placeholders that are defined in the master page
- Content must go inside of Content Placeholders

[Go back to site](#)

## Error

An error occurred during the processing of . Only Content controls are allowed directly in a content page that contains Content controls.

[Troubleshoot issues with Windows SharePoint Services.](#)



# Demo: Looking at existing Page Layout



# Page Layouts

- They are always based on one content type
- Content types are made up of site columns
  - Site columns become field controls in the page layout
  - They allow editable content areas
  - SharePoint keeps a history of all field control content



# Page Layouts

- Web Parts
  - Provide many different ways of displaying content
  - Content stored in web parts is NOT versioned
- Field controls
  - Editable content items
  - Content is saved to the content database.
  - Content can be versioned



# Anatomy of a MOSS page

The screenshot shows the homepage of the Penn Nursing Science website. At the top left is the Penn Nursing Science logo with the text "Penn Nursing Science" and "UNIVERSITY OF PENNSYLVANIA SCHOOL OF NURSING". To the right is a large image of a nurse wearing a mask and goggles, with the slogan "Care to Change the World" overlaid. The top navigation bar includes links for "About Penn Nursing", "Admissions", "Academic Programs", "Faculty & Staff", "Research", "Practice & Community", "Resources", "Giving", "Global Health Affairs", and "Diversity". On the far right, there's a sidebar with links for "Current Students", "Guidance Counselors", "Parents", "Research Colleagues", "Alumni", and "Media", along with a search bar and intranet/directions links. The main content area features a large image of a female nurse in a white coat, with the text "We are Penn Nursing Science. Care to Change the World.™". Below this are three columns of news items: "Care to Join Us" (Students help hurricane-ravaged Mississippi, Nurse anesthetist students on the web!, Penn Nursing offers new Sleep Certificate), "News & Events" (Dr. Compher Named Editor of Nutrition Journal, PhD Student Receives March of Dimes Scholarship), and "Science in Action" (Penn Professor Receives '08 Fichter Research Grant, Dr. Janet Deatrick Named Recipient of the Distinguished Contribution to Family Nursing Research Award). At the bottom left, a quote reads: "We define ourselves differently and hold ourselves to a **higher standard**. We are dedicated to **changing the world** through the **science of nursing**. The research we perform defines the course of healthcare practice around the globe. And the students we educate gain the experience and exposure only an **Ivy League** education can provide. They learn from nursing's foremost leaders." A link below states "We are Penn Nursing Science and we care to change the world." At the bottom right, there's a photo of a woman holding a globe, with the Penn logo and "Visit Web Site" link. The footer contains links for "CONTACT", "PRIVACY POLICY", and "Copyright © 2008 Penn Nursing Science, University of Pennsylvania School of Nursing".



# Anatomy of a MOSS page

The screenshot shows the Penn Nursing Science Master Page. At the top left is the Penn Nursing Science logo with the text "Penn Nursing Science" and "UNIVERSITY OF PENNSYLVANIA". To the right is a large red banner with the slogan "Care to Change the World" and a photo of a person in a white lab coat. A vertical sidebar on the right lists links for "Current Students", "Guidance Counselors", "Parents", "Research Colleagues", "Alumni", and "Media". Below the banner is a navigation bar with links for "About Penn Nursing", "Admissions", "Academic Programs", "Faculty & Staff", "Research", "Practice & Community", "Resources", "Giving", "Global Health Affairs", and "Diversity". On the far right of the navigation bar are "SEARCH", "INTRANET", and "DIRECTIONS". The main content area features a large green box labeled "Page Layout" containing a "Field Control" box with the text "We are Penn Nursing Science. Care to Change the World.™" and a photo of a female nurse. Below this are three yellow boxes labeled "Web Part Zones" containing "Care to Join Us", "News & Events", and "Science in Action" sections. To the right is a yellow box labeled "Web Part Zone". At the bottom is a blue box labeled "Field Control" with the text "We define ourselves differently and hold ourselves to a higher standard. We are dedicated to changing the world through the science of nursing. The students we educate are changing the course of healthcare practice around the globe. And the students we educate gain more than only an Ivy League education can provide. They learn from nursing's foremost leaders. We are Penn Nursing Science and we care to change the world." At the very bottom is a footer with links for "CONTACT | PRIVACY POLICY | Copyright © 2008 Penn Nursing Science, University of Pennsylvania School of Nursing" and a "Visit Web Site" link.

Penn Nursing Science  
UNIVERSITY OF PENNSYLVANIA

Care to Change the World

Current Students  
Guidance Counselors  
Parents  
Research Colleagues  
Alumni  
Media

SEARCH  
INTRANET | DIRECTIONS

## Page Layout

We are Penn Nursing Science.  
Care to Change the World.™

### Field Control

Care to Join Us

Students help victims of Hurricane-ravaged Mississippi...  
Nurse anesthetist students on the web...  
Penn Nursing offers new Sleep Certificate...

News & Events

John Compher Named Editor of Nutrition Journal...  
John Professor...  
Leaves '08 Richter Research Grant...

Science in Action

Janet Deardorff Recipient of Distinguished Contribution to Family Nursing Research Award...

### Web Part Zones

### Field Control

We define ourselves differently and hold ourselves to a higher standard. We are dedicated to changing the world through the science of nursing. The students we educate are changing the course of healthcare practice around the globe. And the students we educate gain more than only an Ivy League education can provide. They learn from nursing's foremost leaders. We are Penn Nursing Science and we care to change the world.

Visit Web Site

CONTACT | PRIVACY POLICY | Copyright © 2008 Penn Nursing Science, University of Pennsylvania School of Nursing



# Page Layouts and Web Parts

- Page layouts can define Web Part Zones
  - WPZ's allow content authors to add editable Web Parts to the pages
- Web parts have a wide range of options for adding content to the page
- The Content Editor Web Part allows content authors to add robust JavaScript and CSS to a page
  - With great power comes great responsibility
- Web Parts do not store content history



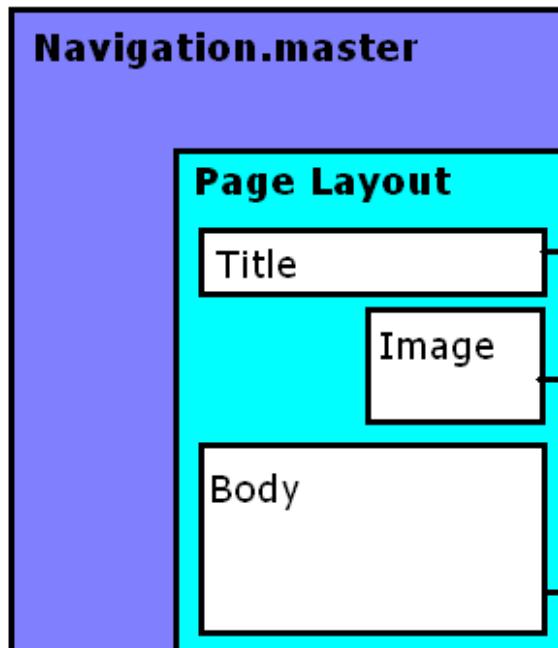
# Page Layouts / Content Types

- Page execution:
- Page URL requested
- Page layout executed in content of page
- Content server controls bind to page fields
- Rendered page returned

## Inherited from WSS:

- Versioning,
- Check-in/Check-out
- Content types
- Access control
- Workflow

## Rendered Page



## Page Content: Documents in WSS document library

FileName	Title	Image	Body	Page Layout Ptr
Article1.aspx	"Some Title"	<img src=...>	<HTML>	<@page inherit="..."/>
Article2.aspx	"Better Title"	<img src=...>	<HTML>	<@page inherit="..."/>
Article3.aspx	"Your Title"	<img src=...>	<HTML>	<@page inherit="..."/>
Article4.aspx	"My Title"	<img src=...>	<HTML>	<@page inherit="..."/>



# Demo: Looking at Content Types



# Creating a Custom Page Layout

- Create new content type (or use an OOTB one)
- Add new site columns if needed
- Create new page layout file in SPD
  - Populate the file with field controls and Web Part Zones
  - Add any HTML for arranging the items
  - Check-in and approve
- Use the SharePoint web interface to create a new page based off of the page layout



# Page Layout Demo



# Publishing Cycle

- Workflow based on Windows Workflow Foundation
- Light-weight approval workflow is active OOB
  - Based on approval
  - Minor versions need to be approved to become major versions
  - Visitors only see the major (published) versions
- Workflow can be replaced by custom workflow
  - OOB delivered with MOSS 2007
  - Designed using SharePoint Designer 2007
  - Created using Visual Studio.NET 2005



# WCM Web Parts

- Summary Links Web Part
  - Custom annotated, stylized links
- Table of Contents Web Part
  - Displays navigation information of your site
- Content Query Web Part
  - Displays a dynamic view of the content in your site



A screenshot of a SharePoint page featuring a 'Summary Links' web part. The web part has a title bar labeled 'Summary Links'. Below the title bar is a toolbar with icons for 'New Link', 'New Group', 'Configure Styles and Layout', and 'Sort'. The main content area contains five links:

- Enable anonymous access**: The root site must be anonymously accessible to enable the forms authentication login page to work from the Sharepoint database. Other sites of the site collection can restrict anonymous access to serve as an authenticated section for membership or account pages. Contact your administrator to have anonymous access enabled in Central Administration and IIS.
- Manage navigation**: Change the navigation links in this site.
- Go to master page gallery**: Change the page layouts and master page of this site collection.
- Manage site content and structure**: Reorganize content and structure in this site collection.
- Set up multilingual support**: Use the variations feature to manage multi-lingual sites and pages.



# Branding with a Minimal Pub Master Page

- Minimal Master Page includes all of the key SharePoint items for Internet sites
- The Lab includes one:  
`Student_Oct_02\Labs\Lab05_Publishingsite\Resourc  
es\Minimal Publishing Masterpage`
- Another one available from my MSDN Article:
  - <http://blog.drisgill.com/2009/08/my-msdn-article-is-live-real-world.html>



# Demo: Looking at Minimal Master Page



# Using the Minimal Master Page

- Mockup the page design in HTML
- Copy the minimal master page
- Add the HTML structure to the minimal master
- Move all of the SharePoint functionality into the HTML structure
- Add the CSS and Images to the Style Library
- Publish and approve the files and apply to SharePoint site
- Tweak CSS for SharePoint



# Demo: Working with Minimal MP



# Summary

- Understanding the MOSS Publishing features
- Overview of Page Layouts and the Pages library
- Designing page layouts using content types and field controls
- Uploading CSS files and images to the Style Library



# **Migrating a Professional Branding Design into SharePoint**



# Agenda

- Planning for Branding
- Wireframes
- Creating a Design Mockup in Adobe Photoshop or Expressions Design
- Moving design assets into SharePoint



# Why Plan for Branding

- Creating custom themes and master pages can be time consuming
- By taking some time upfront to plan, designers and developers can spend less time changing complex master pages, themes, and CSS



# Planning for Branding

- Gather Design Requirements
- Create Simple Wireframes
- Create Realistic Design Comps
- Create working HTML and CSS version of the design
- Once these steps are done you are ready to create the brand in SharePoint



# Gathering Design Requirements

- Involve Key Stakeholders in the business
- The more people involved the more complex and time consuming the process can be
- Define the Success Criteria for the project
  - How do we measure the success
- Define the audience to the site
  - What is the user base trying to do on the site
  - What are their Demographics



# Design Considerations

- Differences between Intranet and Internet
- Internet:
  - Internet sites are usually focused on publishing information
  - Few content authors / many consumers
  - Usually highly customized UI
- Intranet:
  - Intranet sites are usually focused on collaboration
  - Many content authors and consumers
  - Usually a more simple UI with consistent branding
- Planning for “self service”
  - When creating a design for SharePoint, you must consider that areas of the design will be completely out of your control once the site goes live
  - Have policy in place for making sure corporate standards are met
  - Plan for change, once you empower your users to edit content you will quickly learn their needs

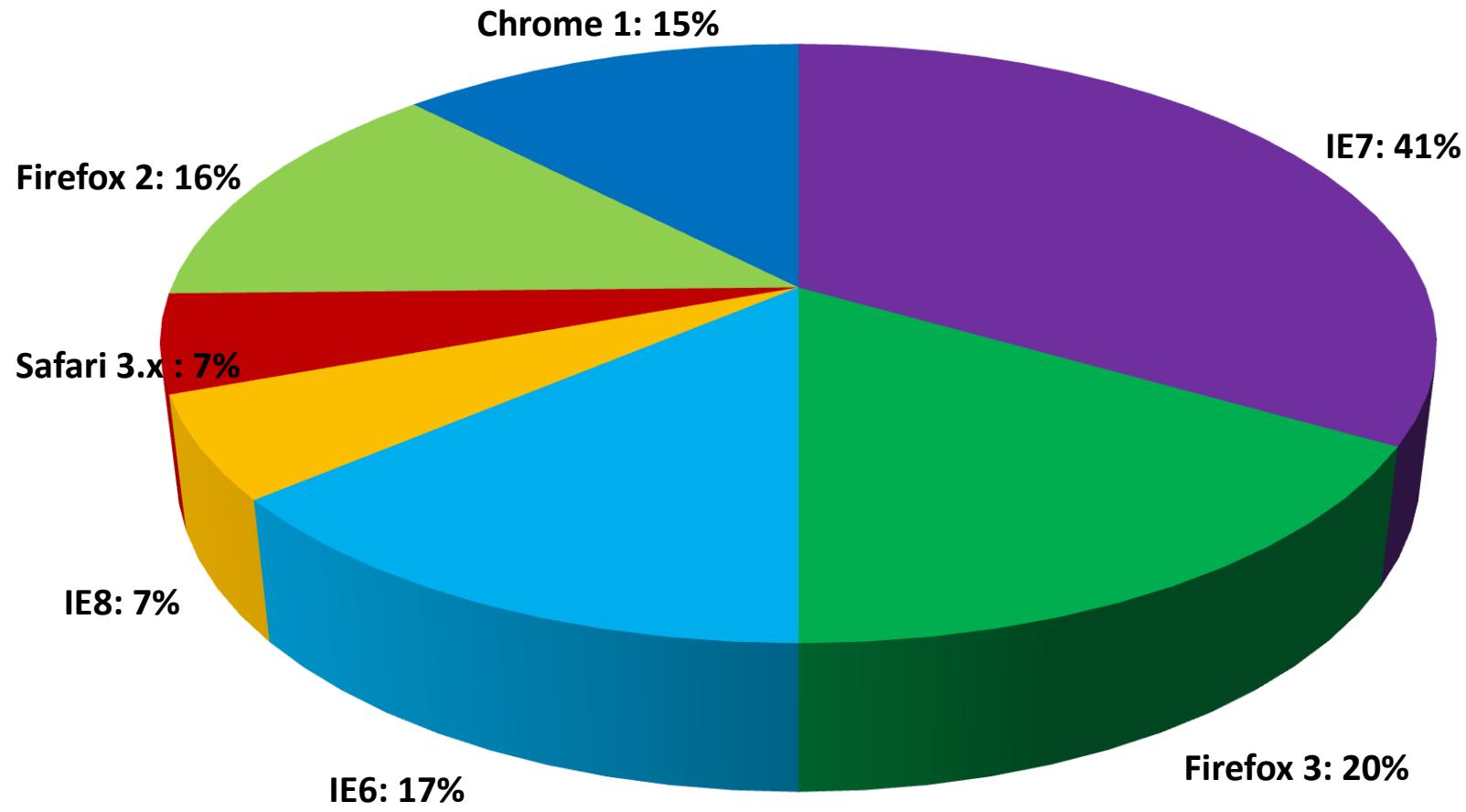


# Design Considerations

- Functionality
  - Will your design require all of the OOTB features?
  - Search? Breadcrumbs? Top navigation? Left Navigation? Tree View? My Sites? My Links? Help? Login?
- Ease of Use
  - Clean / Simple UI (white space)
  - Keep the design consistent – Do the users feel like the entire site is one cohesive unit?
  - Make sure common functions are easily found – Multiple forms of navigation are ok
- Best Practices
  - Choose a maximum height and width in accordance with end user capabilities
  - Image sizes
  - W3C Compliance



# Browser Market Share

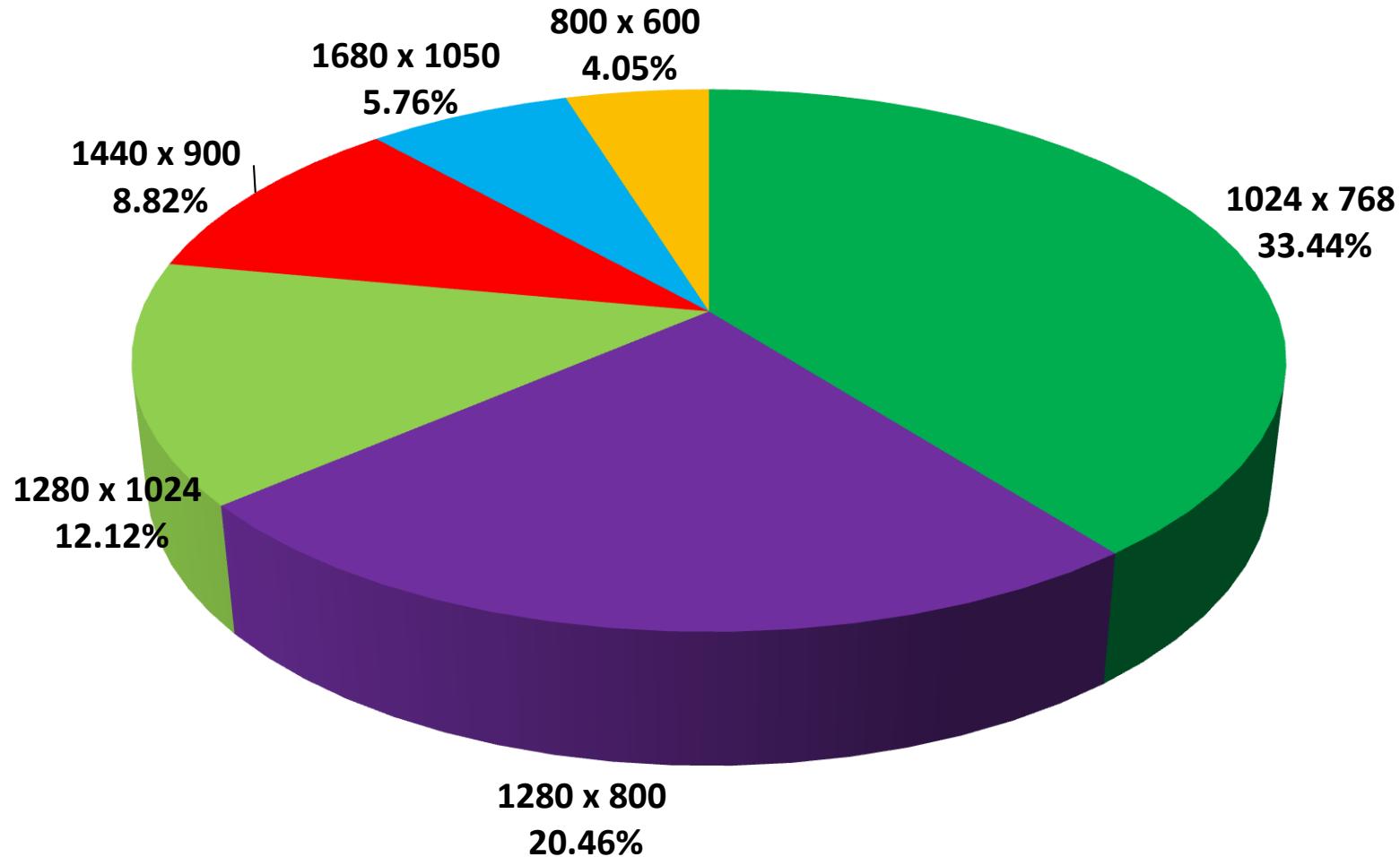


Source:

<http://marketshare.hitslink.com>



# Browser Resolutions



Source:

<http://marketshare.hitslink.com>



# SharePoint Requirements

- Will the site be WSS or MOSS Publishing based?
- Will Themes or Master Pages be used?
- Information Architecture
  - Taxonomy
  - Rollup strategy



# Design Considerations

- Taxonomy
  - Create a hierarchical flow chart of how your site will flow
  - Will each department get its own SharePoint site? Or will they just get pages?
  - With a sound taxonomy you can start to think about navigation needs
- Navigation
  - Do you need top and side navigation? Do you need multiple levels of navigation?
  - Will the navigation be constant across all pages or will it change per section
  - Will navigation be managed manually using the MOSS web UI



# Estimating Branding

Branding should be estimated after requirements are gathered and before any other work happens

- Master page vs. theme
- Skill level of designers
- Deployment considerations
- How much time is available
- Complexity of the design
- Number of elements to be styled
- Flexibility of the stakeholders
- Give enough time to test

Setting expectations is key!



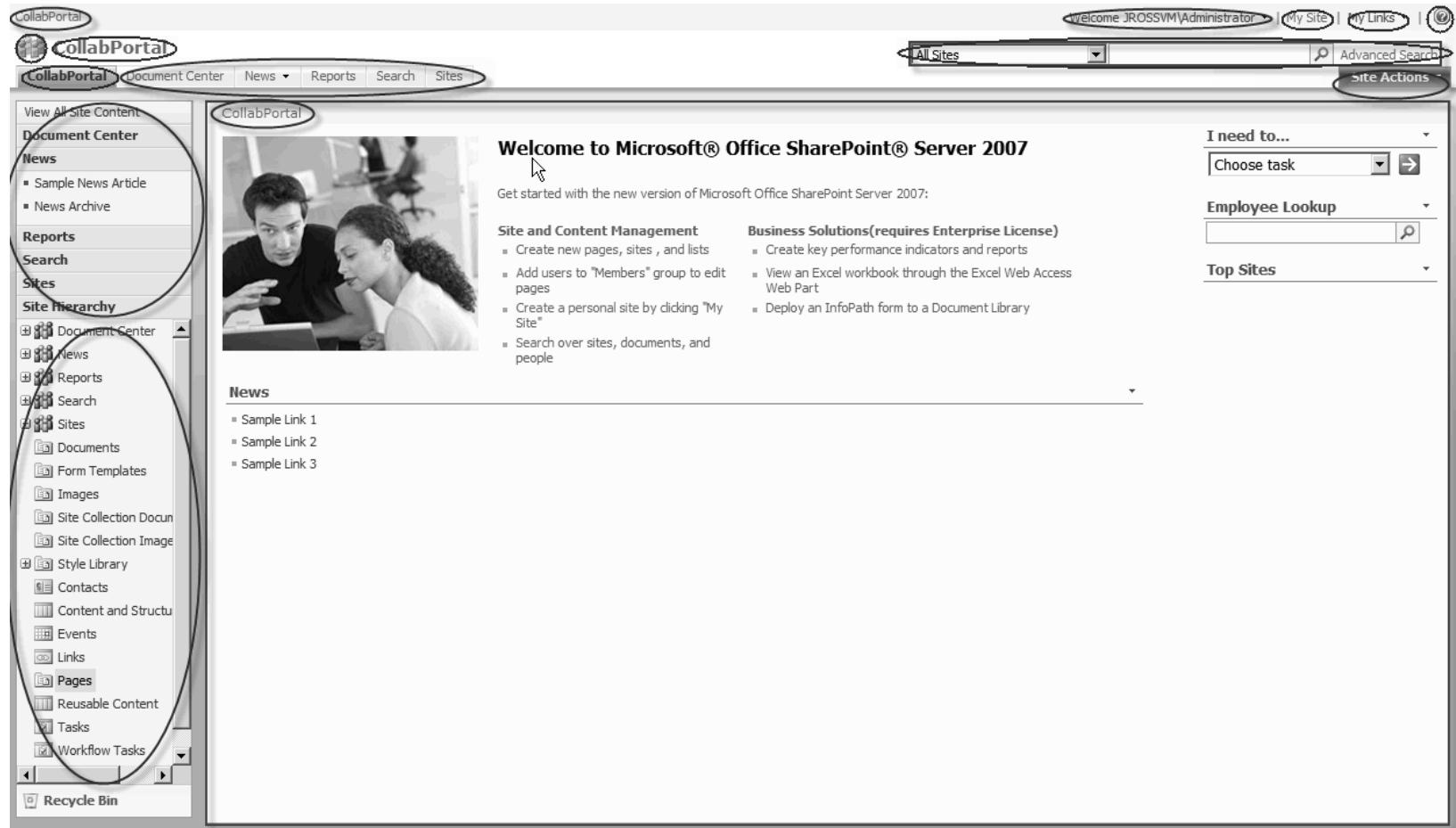
# Creating Wireframes

- Wireframes are block diagrams that visually describe the structure and functionality of a web site
  - Usually created Microsoft Visio
  - SharePoint Visio Templates:
  - [http://www.guuui.com/issues/02\\_07.php](http://www.guuui.com/issues/02_07.php)
  - <http://www.siolon.com/blog/sharepoint-wireframes/>
- Include targeted content and SharePoint functionality



# Creating Wireframes

What SharePoint functionality will or won't be featured?



# Visio Wireframe

The wireframe illustrates a website structure with the following components:

- Header:** Contains site actions, a welcome message ("Welcome Adams, John"), a search bar ("Search the site:"), and a live search button.
- Main Navigation:** A horizontal menu bar with links: Home, Destination guides, Trip planner, News/Events, Blogs, and Contact Us.
- Logo:** A placeholder for a logo image.
- Image:** A large placeholder for a main image or banner.
- Related Links:** A section titled "Related Links" containing four collapsed "Current Nav" items.
- Top Destinations:** A section titled "Top Destinations" with the subtext "Build your own trip. Great deals exclusive to Students and Under 26's".
- Trip Planner:** A section titled "Trip Planner" with a large empty box for content.
- Footer:** Includes links for Contact Us, Terms of Use, Privacy Statement, Trademarks, and a Microsoft logo.



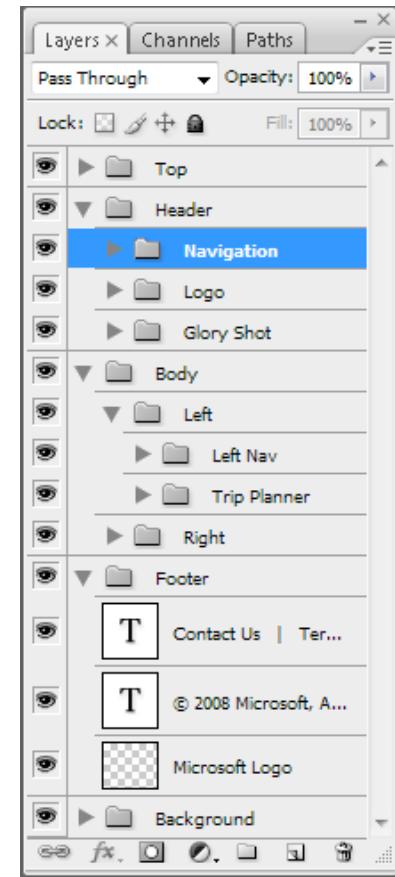
# Create Realistic Design Comps

- Comp is short for Comprehensive Layout
- Unlike Wireframes, design comps are meant to closely mimic the colors and look of an actual web site design.
- Comps should be created in a modern design tool like Adobe Photoshop or Microsoft Expression Design
- Comps should include anything that will appear on the page:
  - Photos, logos, colors, fonts, form elements, and screenshots of SharePoint functionality



# Create Realistic Design Comps

- Modern design tools like Photoshop and Expression Design allow for reusable layered / exportable design elements
- Be careful to make the design realistic
  - Be mindful of text anti-aliasing (don't set expectations higher than the browser can reflect)
  - Be sure to accurately reflect what is possible in SharePoint



# Photoshop Basics

- Working with PSD's
  - Photoshop's native format
  - Supports layers and editable text
- Working with Layers and Groups
  - Create as many layers as needed to make sure each element is editable by itself
  - Group common layers for easy maintenance
  - Use layer effects to make color and gradient changes, as well as for other effects like bevels and drop shadows



# Photoshop Basics

- Working with text
  - Be careful choosing body or link fonts that are unavailable on user machines
  - Be careful with anti-aliasing, sometimes text will look better or worse in Photoshop than it will on the web
  - Large text should probably be converted to images before exporting to SharePoint
- Working with colors
  - The eyedropper is good for getting hexdecimal values of colors to transfer to CSS
  - Use the Hue and Saturation menu to change hues of images
  - Image > Adjustments > Hue and Saturation



# Slicing and dicing Photoshop graphics

- Creating repeating backgrounds
  - Often you will want to just save a small area of an image so that it can be repeated horizontally or vertically
- Saving for the web
  - File > Save for Web and Devices
  - Using GIF, JPG, and PNG formats
  - Compression, choose the smallest size without compromising the look
  - Creating transparent images
  - Transparent PNG's not fully supported in all browsers



# Expression Design

- <http://www.microsoft.com/expression/>



# Complex Designs

- Sometimes it's a good idea to create a complex design in HTML first before working with SharePoint
- Most of the HTML and CSS work can be reused in SharePoint branding



# Moving design assets into SharePoint

- Where should everything live?
  - \_layouts folder in the 12 folder
  - /style library/images
  - /images
- Uploading assets with the SharePoint web UI
  - Site Actions > View All Site Content
  - Style Library
  - Upload
- Uploading assets with SharePoint Designer
  - Navigate to /style library/images
  - Simply drag images from your computer into the Folder pane



# Additional Information

- Links

- <http://www.smashingmagazine.com/tag/photoshop/>
- [Adobe Photoshop Basics](#)
- [Learn Expression Design](#)

- Recommended Books

- [Adobe Photoshop CS4 Classroom in a Book](#)
- [Microsoft® Expression® Design Step by Step \(Microsoft Press\)](#)



# Summary

- Planning for Branding
- Wireframes
- Creating a Design Mockup in Adobe Photoshop or Expressions Design
- Moving design assets into SharePoint



# SharePoint Development and Solution Package Deployment

## Achieving Reusability and Ease of Deployment



# Agenda

- SharePoint Customization versus Development
- Developing Features
- Solution Packages Deploy
- Creating a Branding Solution



# Customization Versus Development

- Site Customizations
  - Changes to one particular site
  - Done using the browser or the SharePoint Designer
  - Changes recorded in content database
  - Easy to do but hard to reuse
- WSS Development
  - Creation of reusable templates/components
  - Templates/components installed on Web server
  - Development based on Visual Studio projects
  - Project source files checked into source code control
  - Projects can be moved through staging to production



# What is a Feature?

- A building block for creating SharePoint solutions
  - A unit of design, implementation and deployment
- Features can contain elements
  - e.g. menu items, links, list types and list instances
  - Many other element types possible
- Features can contain event handlers
  - You can add any code which used WSS object model



# User's View of Features

- Features support concept of activation/deactivation

The screenshot shows the 'Site Features' page in a Windows Internet Explorer browser. The URL is [http://litwareinc.com/\\_layouts/ManageFeatures.aspx](http://litwareinc.com/_layouts/ManageFeatures.aspx). The page title is 'Site Features'. It lists several features with their descriptions and status buttons:

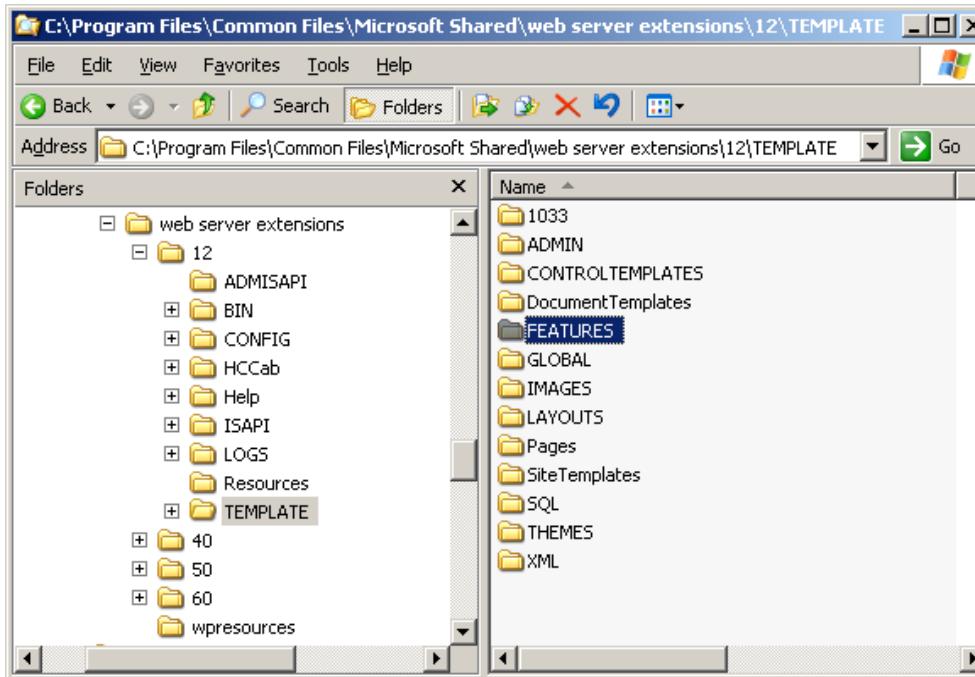
Name	Status
Office SharePoint Server Enterprise Site features Features such as the business data catalog, forms services, and Excel Services, included in the Office SharePoint Server Enterprise License	Activate
Office SharePoint Server Publishing Create a Web page library as well as supporting libraries to create and publish pages based on page layouts.	Activate
Office SharePoint Server Standard Site features Features such as user profiles and search, included in the Office SharePoint Server Standard License	Activate
Team Collaboration Lists Provides team collaboration capabilities for a site by making standard lists, such as document libraries and issues, available.	Deactivate (button is greyed out) Active
Translation Management Library Create a translation management library when you want to create documents in multiple languages and manage translation tasks. Translation management libraries include a workflow to manage the translation process and provide sub-folders, file versioning, and check-in/check-out.	Deactivate Active

This is the site-level feature management page in a WSS farm where MOSS has been installed.

Much of the functionality of MOSS is enabled and disable by activating and deactivating features that have been developed by the MOSS team.

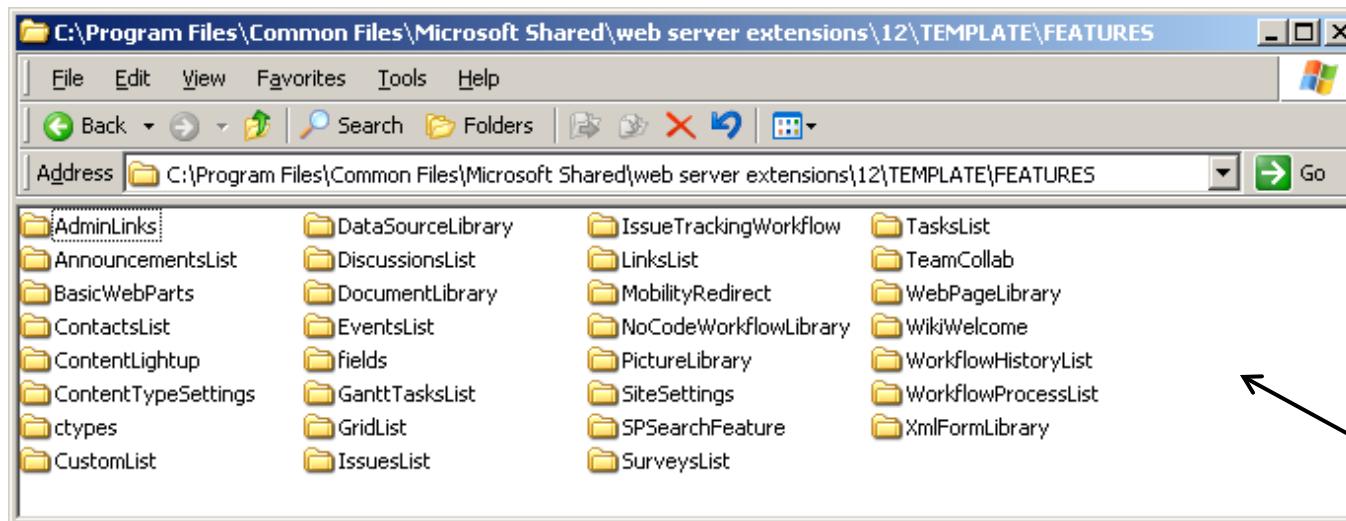
# The WSS System Directories

- Developers must learn WSS system directories
  - \12\TEMPLATE
  - \12\TEMPLATE\FEATURES ← This is the one we care about in this lecture
  - \12\TEMPLATE\IMAGES
  - \12\TEMPLATE\LAYOUTS



# The Features Directory

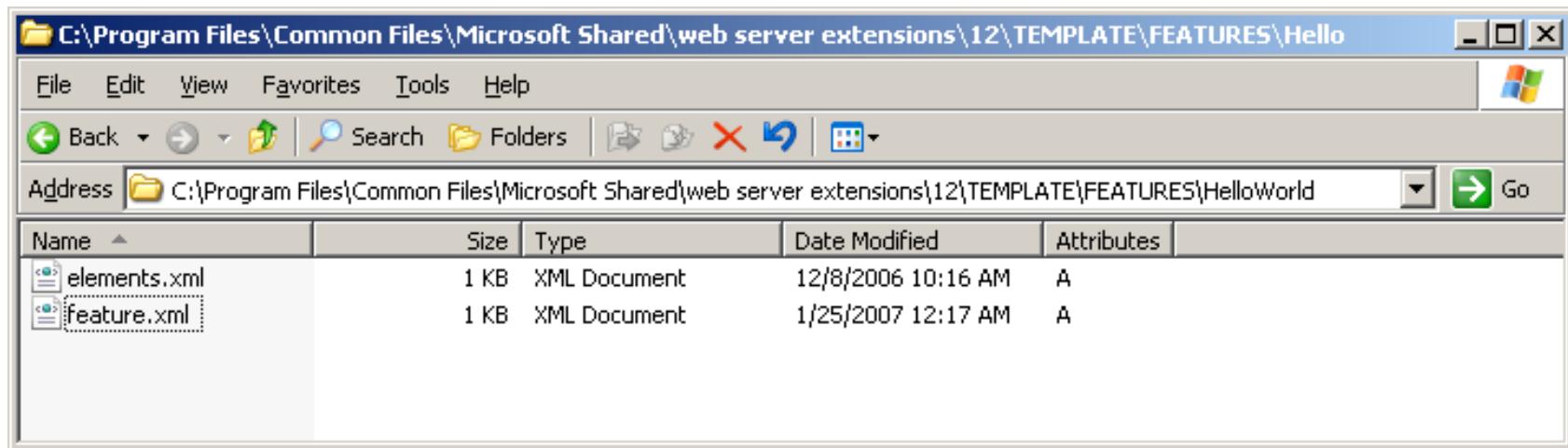
- Functionality in WSS based on Features
  - Features are installed at farm level
  - Feature activation makes functionality available
  - WSS supports for different feature activation scopes
    - (1) Site
    - (2) Site Collection
    - (3) Web Application
    - (4) Farm



Your custom  
features will each  
need a directory  
created here

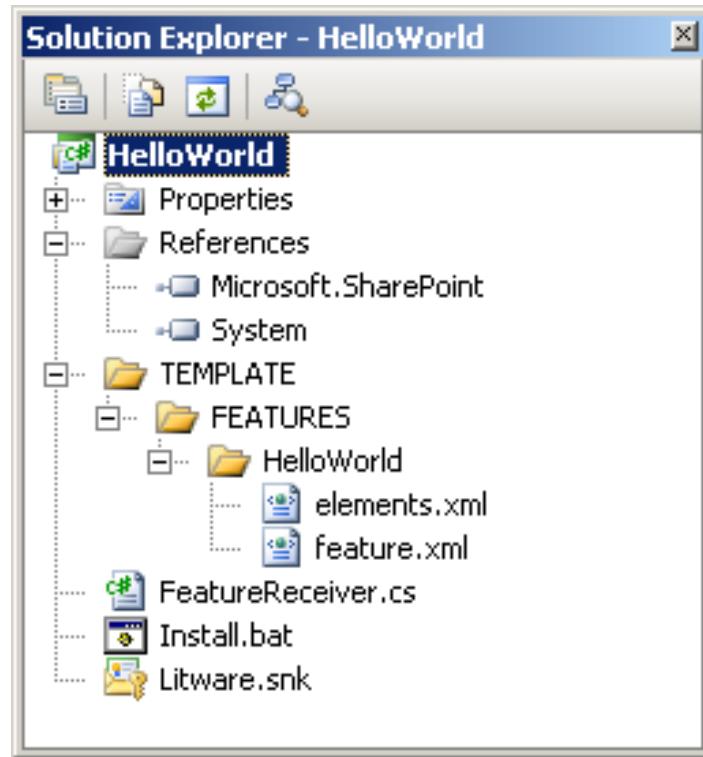
# Developer's View of a Feature

- Each feature requires its own directory
  - Directory must contain feature.xml file
  - Directory often contains other files definition elements



# Creating the 'Hello World' Feature

- Create a new Visual Studio Class Library project
  - Create XML files which define feature
  - Add a FeatureActivated event handler



# The feature.xml file

- Feature.xml file serves as feature manifest
  - Features defined in declarative fashion using **CAML**

**CAML** = Collaborative Application Markup Language

```
<Feature
 Id="B2CB42E2-4F0A-4380-AABA-1EF9CD526F20"
 Title="A Sample Feature: Hello World"
 Description="Hi mom, class is fun. I am doing great"
 Scope="Web"
 Hidden="FALSE"
 ImageUrl="TPG\WhitePithHelmet.gif"
 xmlns="http://schemas.microsoft.com/sharepoint/">

 <ElementMajests>
 <ElementManifest Location="elements.xml" />
 </ElementMajests>

</Feature>
```



# Elements.xml

- Feature includes elements defined using CAML
  - This element defines a Site Actions menu item
  - There are many other types of elements

```
<Elements xml ns="http://schemas.microsoft.com/sharepoint/">

<CustomAction
 Id="SiteActionsToolBar"
 GroupId="SiteActions"
 Location="Microsoft.SharePoint.StandardMenu"
 Sequence="100"
 Title="Hello World"
 Description="A custom menu item added using a feature"
 ImageUrl="_layouts/images/crtsite.gif" >

 <UrlAction Url="http://msdn.microsoft.com"/>

</CustomAction>

</Elements>
```



# Install.bat

- Visual Studio supports post-build events
  - Can be used to run batch file to deploy components
  - Used on development machines
  - Should not be used on staging/production machines

```
@SET TEMPLATEDIR="c:\program files\common files\microsoft shared\web server extensi ons\12\Template"
@SET STSADM="c:\program files\common files\microsoft shared\web server extensi ons\12\bin\stsadm"
@SET GACUTIL="c:\Program Files\Microsoft Visual Studio 8\SDK\v2.0\Bin\gacutil.exe"

Echo Installing HelloWorld.dll in GAC
%GACUTIL% -if bin\debug\HelloWorld.dll

Echo Copying files to TEMPLATE directory
xcopy /e /y TEMPLATE* %TEMPLATEDIR%

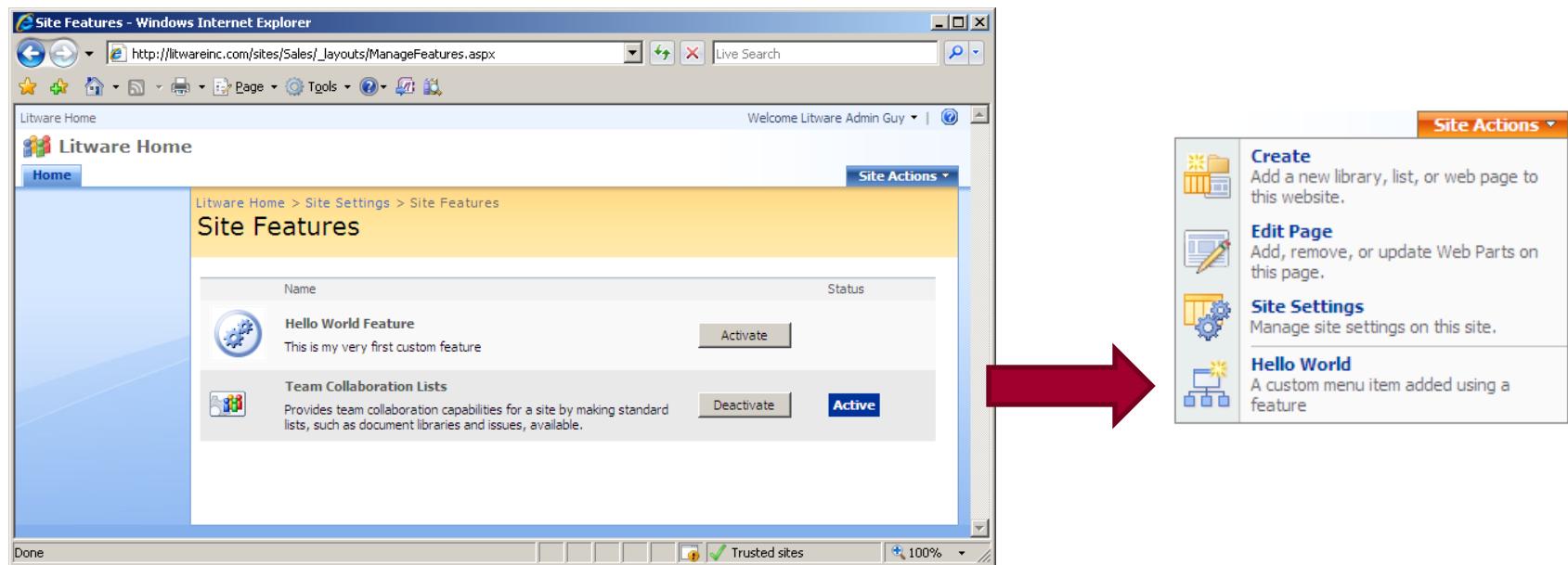
Echo Installing feature
%STSADM% -o installfeature -filename HelloWorld\feature.xml -force

Echo Restart all IIS worker processes
IISRESET

Echo Restart just the IIS worker process for a particular Application Pool
REM cscript c:\windows\system32\iisapp.vbs /a "SharePointDefaultAppPool" /r
```

# Feature Activation

- Steps to testing Feature
  - Copy Feature files to FEATURES directory
  - Install feature with WSS
  - Activate Feature within a specific site



# Deployment using Solution Packages

- Evolution of Web Part Packages from WSS 2.0
  - Solution Package is a CAB file with .wsp extension
  - Solution Package contains a manifest
  - Solution Package contains files required on Web server
- What can be deployed via a Solution Package
  - Feature definitions
  - Application Pages
  - Assembly DLLs
  - And much more...



# Deployment using Solution Packages

- WSS Deployment done with Solution Packages
  - Solution Package is CAB file with .wsp extension
  - Created using DDF file and MAKECAB.EXE
  - Deployed using STSADM.EXE or WSS Central Admin

CustomApplicationPages.dll	Application Extension	
manifest.xml	XML Document	
elements.xml	XML Document	CustomApplicationPages\
feature.xml	XML Document	CustomApplicationPages\
ApplicationPage1.aspx	ASP.NET Server Page	LAYOUTS\CustomApplicationPages\
ApplicationPage2.aspx	ASP.NET Server Page	LAYOUTS\CustomApplicationPages\
ApplicationPage3.aspx	ASP.NET Server Page	LAYOUTS\CustomApplicationPages\
ApplicationPage4.aspx	ASP.NET Server Page	LAYOUTS\CustomApplicationPages\
ApplicationPage5.aspx	ASP.NET Server Page	LAYOUTS\CustomApplicationPages\
ApplicationPage6.aspx	ASP.NET Server Page	LAYOUTS\CustomApplicationPages\
Hello.aspx	ASP.NET Server Page	LAYOUTS\CustomApplicationPages\

CustomApplicationPages.wsp



# Solution Package Manifest

- Solution Manifest read by WSS installer

```
<Solution SolutionId="9EFFE92B-781D-4c99-BBCC-432D248B899D"
 xmlns="http://schemas.microsoft.com/sharepoint/">

 <FeatureManifests>
 <FeatureManifest Location="CustomApplicationPages\feature.xml" />
 </FeatureManifests>

 <TemplateFiles>
 <TemplateFile Location="LAYOUTS\CustomApplicationPages\Hello.aspx" />
 <TemplateFile Location="LAYOUTS\CustomApplicationPages\ApplicationPage1.aspx" />
 <TemplateFile Location="LAYOUTS\CustomApplicationPages\ApplicationPage2.aspx" />
 <TemplateFile Location="LAYOUTS\CustomApplicationPages\ApplicationPage3.aspx" />
 <TemplateFile Location="LAYOUTS\CustomApplicationPages\ApplicationPage4.aspx" />
 <TemplateFile Location="LAYOUTS\CustomApplicationPages\ApplicationPage5.aspx" />
 <TemplateFile Location="LAYOUTS\CustomApplicationPages\ApplicationPage6.aspx" />
 </TemplateFiles>

 <Assemblies>
 <Assembly Location="CustomApplicationPages.dll"
 DeploymentTarget="GlobalAssemblyCache" />
 </Assemblies>

</Solution>
```



# Solution Package: install vs. deploy

- Solution Package Installation
  - WSP file copied into configuration database
  - Done using **addsolution** operation of STSADM.EXE
- Solution Package Deployment
  - WSP files copied to each FE Web Server and deployed
  - Done using **deploysolution** operation of STSADM.EXE

```
REM – a batch file named DeploySolutionPackage.cmd from CustomApplication project
Echo Generating Solution Package CustomApplicationPages.wsp
if EXIST CustomApplicationPages.wsp del CustomApplicationPages.wsp
cd ..
makecab /f Solution\cab.ddf
cd package
```

```
Echo Installing CustomApplicationPages.wsp in WSS Solution Package Store
%STSADM% -o addsolution -filename CustomApplicationPages.wsp
%STSADM% -o execadmsvcjobs
```

```
Echo Deploying Solution Package CustomApplicationPages.wsp
%STSADM% -o deployment -name CustomApplicationPages.wsp -immediate -allowGacDeployment
%STSADM% -o execadmsvcjobs
```

# Deploying Solution Packages

Deploy Solution - Windows Internet Explorer  
http://litwareserver01:9999/\_admin/DeploySolution.aspx?ItemName=customapplicationpages%2Ewsp&Lcid=0

Central Administration

Operations Application Management Site Actions

Central Administration > Operations > Solution Management > Solution Properties > Deploy Solution

## Deploy Solution

Use this page to deploy the solution.

**Solution Information**  
Information on the solution you have chosen to deploy.

Name:	customapplicationpages.wsp
Locale:	0
Deployed To:	None
Deployment Status:	

**Deploy When?**  
A timer job is created to deploy this solution. Please specify the time at which you want this solution to be deployed.

Choose when to deploy the solution:

Now

At a specified time:  
2/28/2007

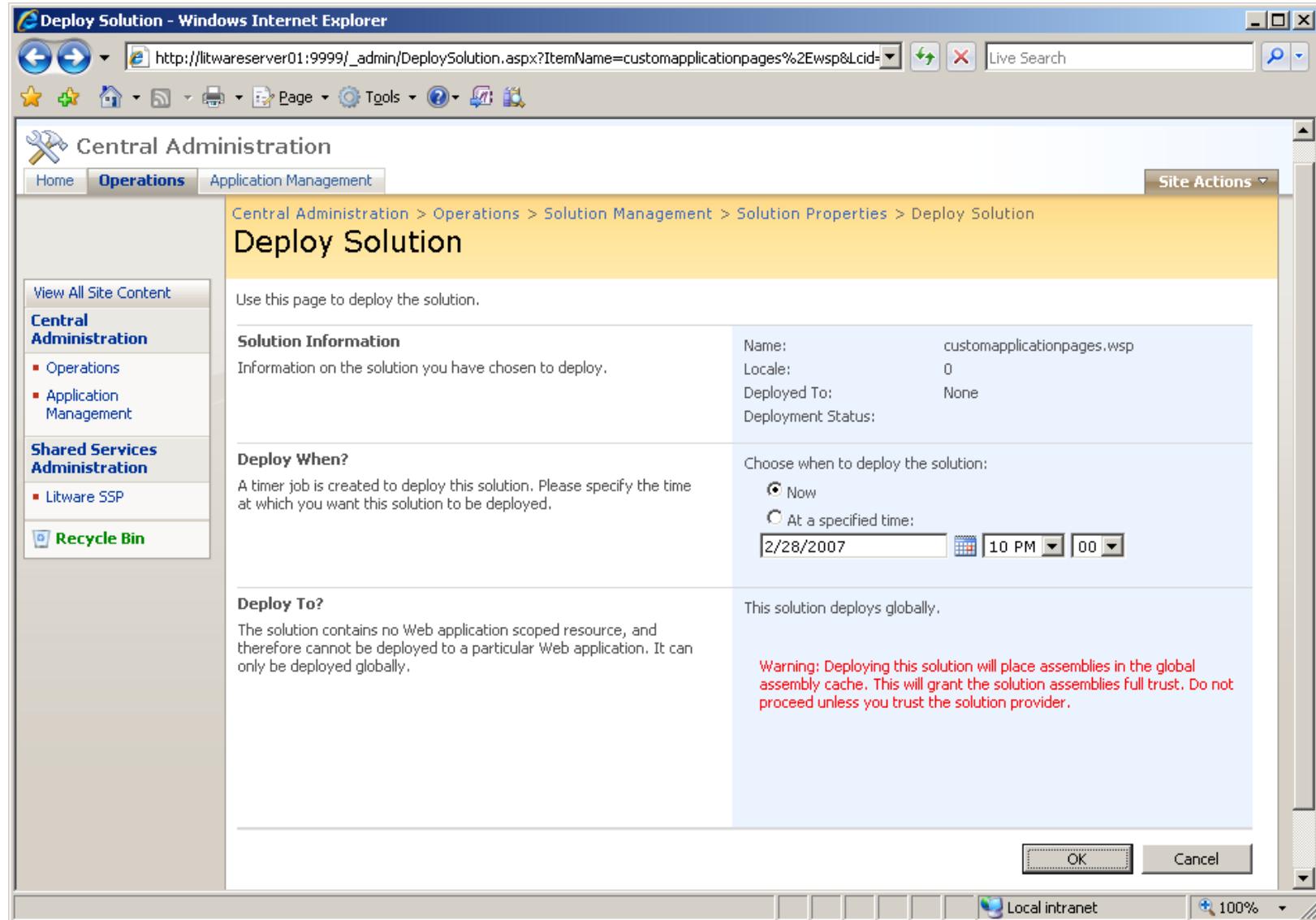
**Deploy To?**  
The solution contains no Web application scoped resource, and therefore cannot be deployed to a particular Web application. It can only be deployed globally.

This solution deploys globally.

Warning: Deploying this solution will place assemblies in the global assembly cache. This will grant the solution assemblies full trust. Do not proceed unless you trust the solution provider.

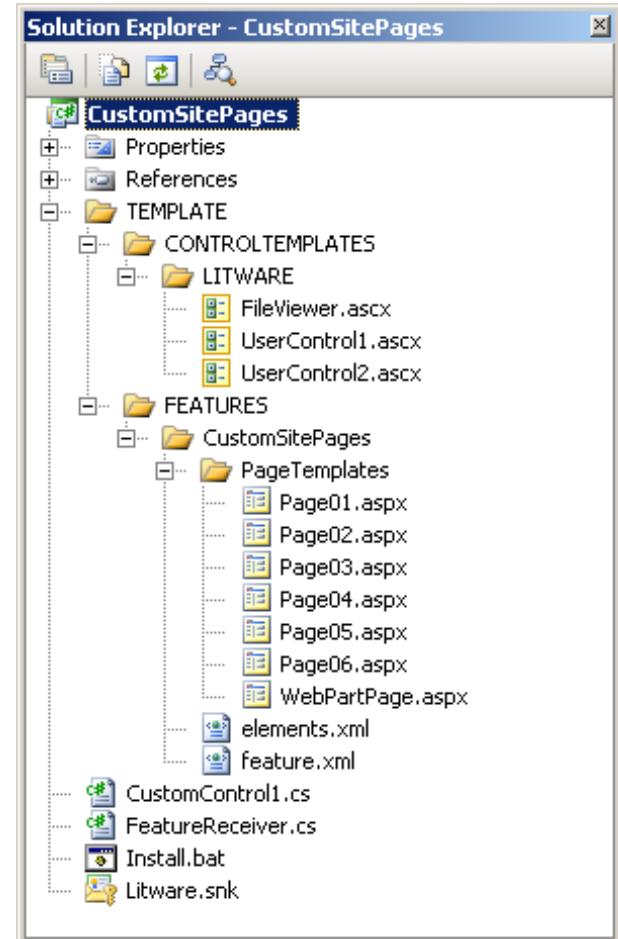
OK Cancel

Local intranet 100%



# Demo: CustomSitePages

- Important Concepts
  - Page template vs. page instance
  - Page customization
  - SafeMode processing



# 'Hello World' Page Template

- Page Template can be added to feature
  - MasterPageFile points to ~masterurl /default.master
  - progid adds support for SharePoint Designer

```
<%@ Page MasterPageFile="~masterurl /default.master"
meta: progid="SharePoint.WebPartPage.Document" %>

<asp:Content runat="server" ContentPlaceholderID="PlaceHolderMain">

 <h3>Hello World</h3>

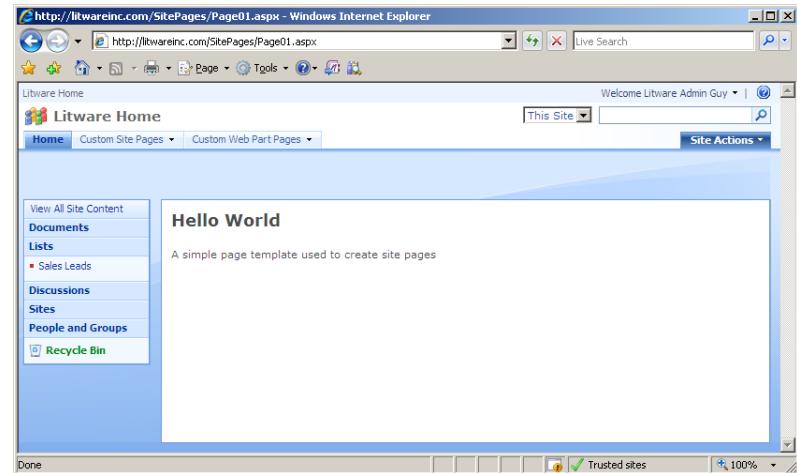
 A simple page template used to create site pages

</asp:Content>
```



# Provisioning a Page Instance

- Module element used to provision page instance
  - File element per page instance
  - Supports page ghosting



```
<Elements xmlns="http://schemas.microsoft.com/sharepoint/">

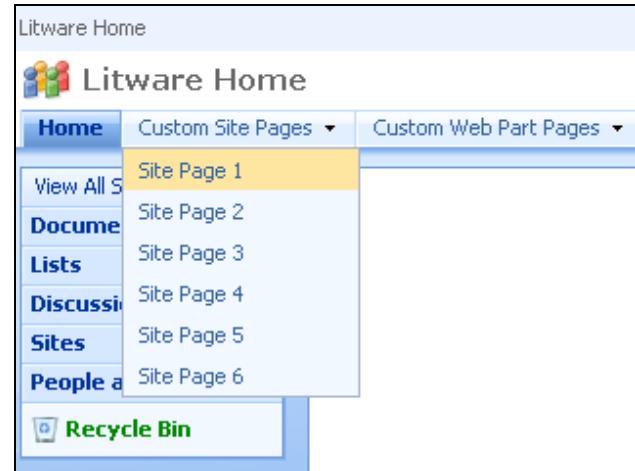
 <Module Path="PageTemplates" Url="SitePages" >
 <File Url="Page01.aspx" Type="Ghostable" />
 </Module>

</Elements>
```



# Adding Navigation Support for Pages

- Navigation nodes can be added
  - Can be added during feature activation
  - Can be added to top-link bar
  - Can be added to QuickLaunch
  - Nodes created as SPNavigationNode



```
public class FeatureReceiver : SPFeatureReceiver {
 public override void FeatureActivated(SPFeatureReceiverProperties properties) {
 // get a hold off current site in context of feature activation
 SPWeb site = (SPWeb)properties.Feature.Parent;
 SPNavigationNodeCollection topNav = site.Navigation.TopNavigationBar;

 // create dropdown menu for custom site pages
 SPNavigationNode DropDownMenu1 =
 new SPNavigationNode("Custom Site Pages", "", false);
 topNav[0].Children.AddAsLast(DropDownMenu1);
 DropDownMenu1.Children.AddAsLast(
 new SPNavigationNode("Site Page 1", "SitePages/Page01.aspx"));
 }
}
```

# Custom Master Page Templates

- Creating a Master Page Template
  - Use default.master as a starting point
  - Make changes to suit your tastes
- Master Page templates like site page template
  - Support ghosting and unghosting
  - Provisioned using a File element within a Module

```
<Elements xml ns="http://schemas.microsoft.com/sharepoint/">
 <Module Name="MasterPages" List="116" Url="_catalogs/masterpage">
 <File Url="Lftware.master" Type="GhostableInLibrary" />
 </Module>
</Elements>
```



# Master Page Elements

```
<%@Master language="C#"%
<%@ Register Tagprefix="SharePoint"
 Namespace="Microsoft.SharePoint.WebControls"
 Assembly="Microsoft.SharePoint, ... "%>

<HTML id="HTML1" runat="server">
<HEAD id="HEAD1" runat="server">

 <!-- SharePoint Utility Controls -->
 <SharePoint:CssLink ID="CssLink1" runat="server"/>
 <SharePoint:Theme ID="Theme1" runat="server"/>

 <!-- Named Placeholders -->
 <Title ID=onetidTitle>
 <asp:ContentPlaceholder id=PlaceHolderPageTitle runat="server"/>
 </Title>
 <asp:ContentPlaceholder id="PlaceHolderAdditionalPageHead" runat="server"/>

 <!-- Named Delegate Control -->
 <SharePoint:DelegateControl
 ID="DelegateControl1" runat="server"
 ControlId="AdditionalPageHead" AllowMultipleControls="true"/>

</HEAD>
```

# Updating the MasterUrl Property

- Update MasterUrl to redirect site pages
  - Child site can reference Master Page in top-level site

```
protected void cmdApplyCustomBrand_Click(object sender, EventArgs e) {
 SPWeb site = SPContext.Current.Site.RootWeb
 string MasterUrlPath = site.ServerRelativeUrl;
 if (!MasterUrlPath.EndsWith(@"/"))
 MasterUrlPath += @"/";
 MasterUrlPath += @_catalogs/masterpage/Litware.master";
 ApplyCustomBrand(MasterUrlPath, site);
}

protected void ApplyCustomBrand(string MasterUrlPath, SPWeb site) {
 site.MasterUrl = MasterUrlPath;
 site.Update();
 // use recursion to update all child sites in site collection
 foreach (SPWeb child in site.Webs) {
 ApplyCustomBrand(MasterUrlPath, child);
 }
}
```



# Agenda

- SharePoint Customization versus Development
- Developing Features
- Solution Packages Deploy
- Creating a Branding Solution



# Silverlight

## Lighting Up SharePoint with Silverlight



# Agenda

- What is Silverlight?
- SharePoint Configuration
- Silverlight 3 and SharePoint
  - Get Started
  - Deployment
  - Data Transfer between Silverlight and SharePoint
  - Data binding





# What is Silverlight?

- Rich User Presentation (XAML + Code-Behind)
- Silverlight 1.0 is 100% JavaScript-driven
- Silverlight 2 uses managed code (small .NET Framework footprint)
- Silverlight 3 supports .NET RIA Services
- Applications are packaged as ZIP files (.XAP extension)



# Getting Started with Silverlight

- Silverlight 3 Runtime
- Silverlight 3 SDK
- Visual Studio 2008
  - Microsoft Silverlight Tools Visual Studio 2008
    - Silverlight 3 Application Project Template**
    - Silverlight 3 Class Library Project Template**
    - Silverlight 3 Navigation Application Template**
    - XAML IntelliSense**
    - Limited Design Experience**
- Expression Blend 3
  - Rich Design Experience
  - Sync options with project in Visual Studio 2008



# Silverlight and SharePoint

- Sample scenarios
  - Complex and dynamic interaction with data in dashboard pages (charting, reporting, ...)
  - Visualize multimedia data stored in SharePoint
  - Rich navigation controls
  - Interactive field types, Web parts and pages
  - Off-load more work to the clients



# SharePoint Server Configuration

- WSS 3.0 Service Pack 1 adds support for .NET Framework 3.5
  - .NET Framework 3.5 needed for Silverlight 3
  - .NET Framework 2.0 is fine for Silverlight 1.0
- MIME type registration of the .XAP file extension for IIS Web application
  - Format: application/x-silverlight-app
  - Automatically included as of IIS 7



# XAML Essentials

## ■ **App.xaml**

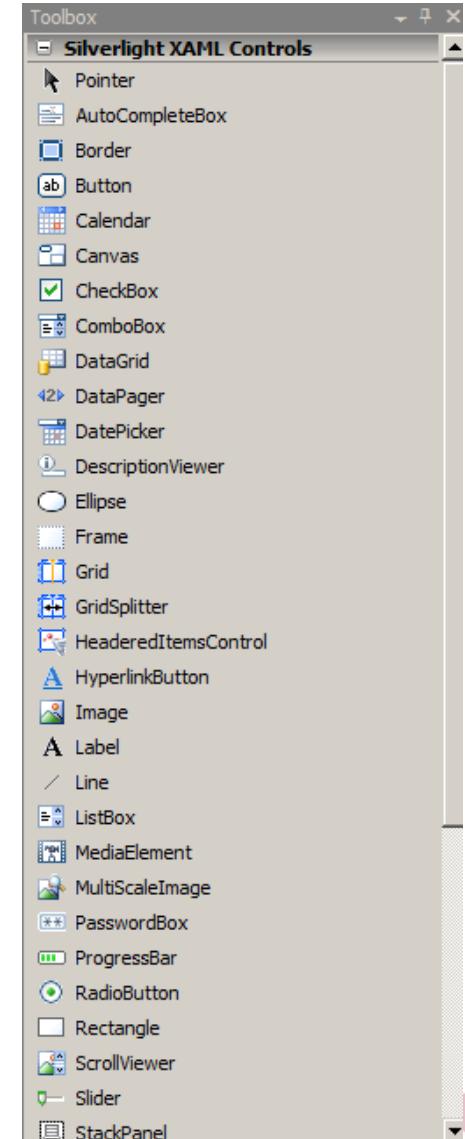
- Entry Point of the Silverlight application
- Can contain Application Resources such as styles

## ■ **MainPage.xaml**

- UserControl
- Canvas vs Grid
- TextBlock
- StoryBoard

## ■ **MyControl.xaml**

- Re-usable control



# XAML Code Behind

- **App.xaml.cs**
  - Application\_Startup is place where incoming parameters are processed and MainPage object is created
- **MainPage.xaml.cs**
  - Handle events
  - Dynamically create XAML elements
  - Connect to browser DOM
  - Connect to external data (e.g. Web Services)
- **MyControl.xaml.cs**
  - Code-behind for control



# Where to deploy the XAP?

- **Scope = Site**
  - Document Library in Site
- **Scope = IIS Web Application**
  - ClientBin folder in IIS Web App folder
- **Scope = Server**
  - Layouts folder
  - ControlTemplates folder
- **Scope = Web Part**
  - Embedded Resource



# Hosting Silverlight in Web Part - 1

- **Silverlight.js**
  - Comes with the Silverlight 3 SDK
  - Location:  
C:\Program Files\Microsoft SDKs\Silverlight\v3.0\Tools
  - Must be deployed in the 12 Hive
  - Must be loaded in OnPreRender event

```
protected override void OnPreRender(EventArgs e)
{
 base.OnPreRender(e);
 // Include the required javascript file.
 ClientScriptManager cs = Page.ClientScript;
 if (!cs.IsClientScriptIncludeRegistered("sl_javascript"))
 cs.RegisterClientScriptInclude(this.GetType(), "sl_javascript", "/_LAYOUTS/Silverlight.js");
}
```

- Heavy Silverlight usage in SharePoint:
  - Deploy as ControlTemplate to AdditionalPageHead delegate control



# Hosting Silverlight in Web Part - 2

- Add Silverlight object in Render method

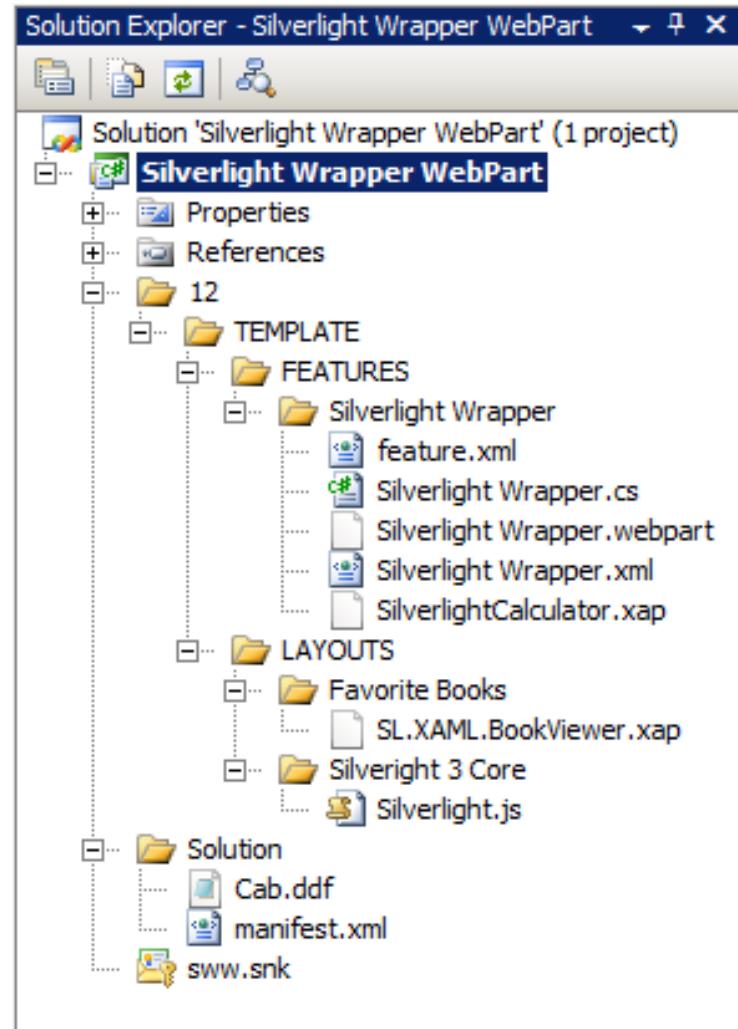
```
protected override void Render(HtmlTextWriter writer)
{
 base.Render(writer);

 writer.WriteLine("<object id=\"SilverlightHost\"");
 writer.WriteLine(" width=\"" + width + "\"");
 writer.WriteLine(" height=\"" + height + "\"");
 writer.WriteLine(" data=\"data:application/x-silverlight-2,\"");
 writer.WriteLine(" type=\"application/x-silverlight-2\"");
 writer.WriteLine(" <param name=\"source\" value=\"" + source + "\"/>");
 writer.WriteLine(" <param name=\"initParams\" value=\"" + initParams + "\"/>");
 writer.WriteLine(" <a href=\"http://go.microsoft.com/fwlink/?LinkId=149156\" ");
 writer.WriteLine(" style=\"text-decoration: none;\"");
 writer.WriteLine(" <img src=\"http://go.microsoft.com/fwlink/?LinkId=108181\" ");
 writer.WriteLine(" alt=\"Get Microsoft Silverlight\"");
 writer.WriteLine(" style=\"border-style: none;\"");
 writer.WriteLine(" ");
 writer.WriteLine("</object>");
}
```



# Demo: Silverlight Enabled Web Part

- Important Concepts
  - Developing a Silverlight enabled Web Part
  - Packaging the Web Part
  - Deploying the Web Part



# Communication with Silverlight

## ■ **Silverlight.InitParameters**

- Small amount of initialization data
- Pass as comma delimited string  
**Key1=value1, key2=value2, ...**
- Process as IDictionary in Application\_StartUp

## ■ **Hidden INPUT Field (two-way)**

- Pass client ID with InitParameters
- Cross-Browser compatible

## ■ **XML Data Island**

- Pass ID with InitParameters
- Works only in IE but useful for XML data



# Downloading Media

- WebClient object
  - Streams
  - Asynchronous
  - OpenReadCompleted
- Pass Incoming Stream to
  - Pictures go into an Image Element
  - Videos go into a MediaElement



# Summary

- Why do we need Silverlight
- Silverlight Integrating with SharePoint
- Where to deploy the Silverlight application
- Communication between Silverlight and SharePoint
- Data binding
- Downloading Media



# **Introduction to SharePoint 2010 Branding**



# Agenda

- Terminology
- SP2010 UX Overview
- Branding Enhancements in SP2010
- Approaches to Branding in SP2010
- Getting Started



# Vocabulary Lesson

- SharePoint Foundation 2010 is the free version of SharePoint
  - Focused on collaboration with documents and light editing of web pages
- SharePoint Server 2010 is the licensed version of SharePoint
  - Includes among other capabilities the Publishing Feature
  - Much better platform for creating a strongly branded web site



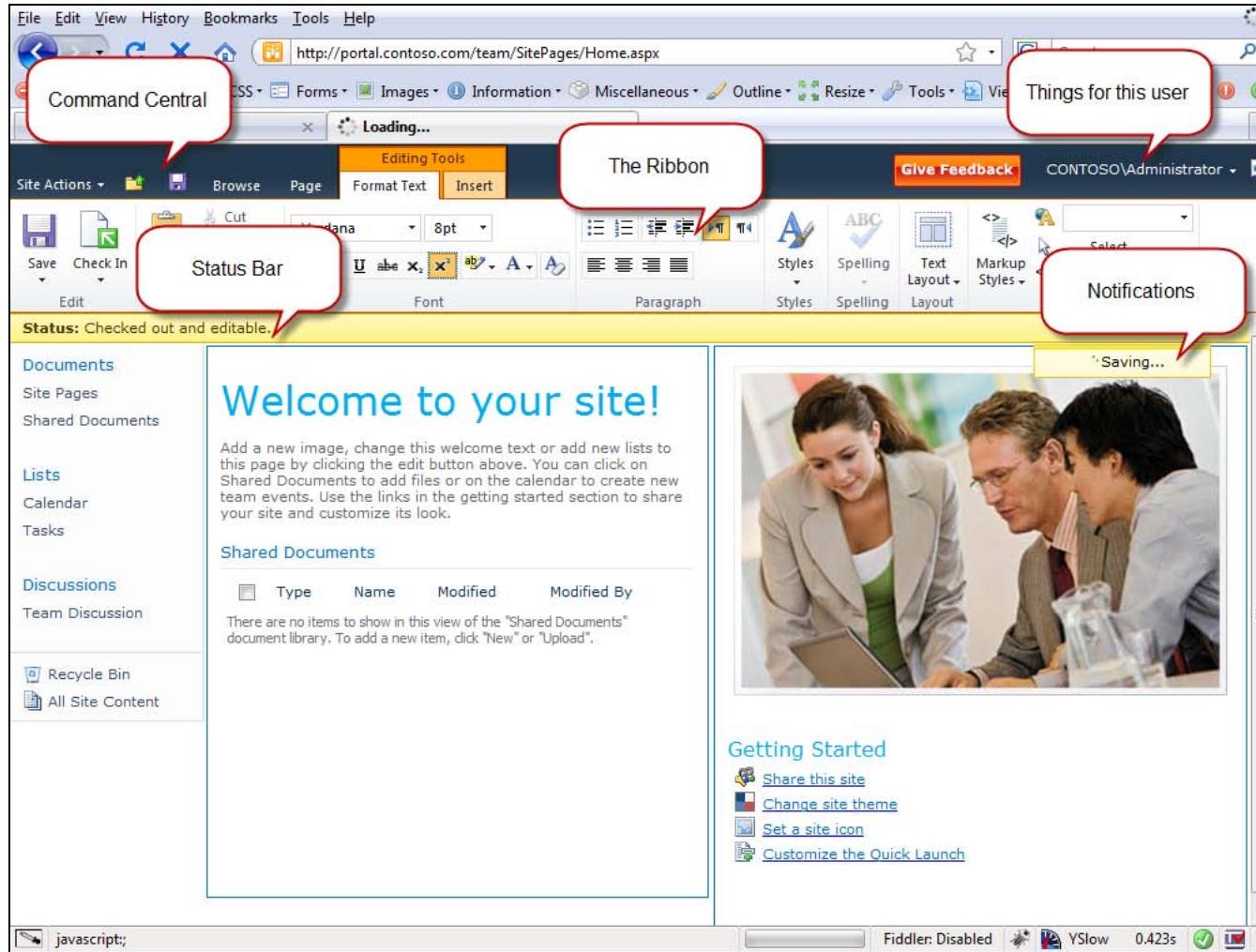
# SharePoint 2010 UX



JOANNSCHEEZBURGER.COM ☺ ☺ ☺



# SP2010 UX Overview



# User Experience Demo



# Master Page Enhancements

- Can be applied to Application pages
  - Pages with \_layouts in the URL
  - In 2007 this meant creating a Theme or even worse customizing the Application.master
- Some pages still reference Simple.master like login and errors
- What does this mean to Branders?



# OOTB Master Pages

The image shows two SharePoint site pages side-by-side, illustrating the use of the Out-of-the-Box (OOTB) master page.

**Left Site Page:**

- Header:** Site Actions, Browse, Page, Give Feedback, CONTOSO\Administrator, I Like It, Tags & Notes, Search this site...
- Breadcrumb:** Team > Home
- Content Area:** Welcome to your site! (Large blue header), Add a new image, change this welcome text or add new lists to this page by clicking the edit button above. You can click on Shared Documents to add files or on the calendar to create new team events. Use the links in the getting started section to share your site and customize its look., Shared Documents (Thumbnail image of three people working together).
- Left Sidebar:** Documents, Site Pages, Shared Documents, Lists, Calendar, Tasks, Discussions, Team Discussion, Recycle Bin, All Site Content.
- Right Sidebar:** Getting Started, Documents, Site Pages, Shared Documents, Lists, Calendar, Tasks, Discussions, Team Discussion.

**Right Site Page:**

- Header:** Give Feedback, CONTOSO\Administrator, Search this site..., Portal > Team
- Breadcrumb:** Adventure Works > Home
- Content Area:** Welcome to your site!, Add a new image, change this welcome text or add new lists to this page by clicking the edit button above. You can click on Shared Documents to add files or on the calendar to create new team events. Use the links in the getting started section to share your site and customize its look., Shared Documents (Thumbnail image of three people working together).
- Right Sidebar:** Getting Started, Share this site, Change site theme.



# Master Page applied to \_layouts

The screenshot shows a SharePoint site titled "SHAREPOINT911 - THE SHAREPOINT AUTHORITY". The navigation bar includes links for Press Releases, Test3, Heading, Item1, Events, Team, Our Team, Home, and Portfolio. A sidebar on the left says "Need info on your SharePoint project? Contact us". The main content area features a "Our Team" section with a blue and orange logo. Below it is a text block about SharePoint911's services and a "Press Release" section. At the bottom, there's a copyright notice: "© Copyright 2009 SharePoint911 | All Rights Reserved." and a "Micrsoft Certified" badge.

The screenshot shows the "Site Settings" page for the same SharePoint site. The left navigation pane lists Site Settings, Look and Feel, Site Information, Site Actions, and Site Collection Administration. Under "Look and Feel", the "Master page" link is highlighted. The right pane displays various site settings options like Welcome Page, Master page, Page layouts and site templates, etc. The status bar at the bottom indicates "Fiddler: Disabled" and "YSlow 0.29s".

# Web Standards Enhancements

- Web Content Accessibility Guidelines (WCAG) 2
- Cross-browser support: IE, Firefox, Safari
  - NO IE6 
- Less HTML Tables
- More XHTML compliant HTML
- CSS Sprites – Better caching for icons
- Full W3C Compliance? Not really



# Browsers in 2010

- Level 1 Experience
- Windows XP, Windows Vista, Windows Server 2003, Windows Server 2008
  - Internet Explorer 7, Internet Explorer 8, Mozilla Firefox 3.5
  - Windows 7, Windows Server 2008 R2
  - Internet Explorer 8 (32-bit), Firefox 3.5



# Browsers in 2010

- Level 2 Experience
- Apple Mac OS X Snow Leopard
  - Apple Safari 4.x, Mozilla Firefox 3.5
- Windows XP, Windows Vista, Windows Server 2003, Windows Server 2008
  - Internet Explorer 7, Internet Explorer 8 (64-bit)
  - Windows 7, Windows Server 2008 R2
  - Internet Explorer 8 (64-bit)
- UNIX/Linux 8.1
  - Firefox 3.5



# Navigation Enhancements

- The AspMenu now has a Simple Rendering mode
  - Cleaner code based on HTML unordered lists
- Can be styled to look the same as always
- If this frightens you, turn off Simple Rendering
  - SharePoint will use the old Table rendering method and all your old CSS styling will work



# Simple Rendering Mode HTML

```
<li class="static dynamic-children">
 <a class="static dynamic-children menu-item"
 href="http://www.bing.com">

 Heading

 <ul class="dynamic">
 <li class="dynamic">

 Item


```



# SharePoint 2010 Themes

- Colors (including shading images) + fonts in open XML format
- Create THMX files with Office 2007 and up
- With SharePoint Server
  - Can be created and adjusted by site owners from their browser!
  - Can be applied to all sub-sites



# SharePoint 2010 Themes

- CSS has comment's in the markup that tell SharePoint what colors and fonts to replace
- Can apply to your custom branding if you use the comments / themeable folder

```
/* [ReplaceColor(themeColor:"Light1")] */
background-color:#fff;
```



# SharePoint 2010 Themes

The image displays four side-by-side screenshots of the SharePoint 2010 Site Settings page, illustrating the visual impact of different themes on the interface.

**Purple Theme:** The top-left screenshot shows a purple header bar with the "Adventure Works" logo and navigation links. The main content area has a purple background with white text. The "Site Settings" title is in orange, and the left navigation bar also features orange text for categories like "Documents" and "Users and Permissions".

**Green Theme:** The top-middle screenshot shows a green header bar with the "Adventure Works" logo and navigation links. The main content area has a green background with white text. The "Site Settings" title is in orange, and the left navigation bar features orange text for categories like "Documents" and "Users and Permissions".

**Orange Theme:** The bottom-left screenshot shows an orange header bar with the "Adventure Works" logo and navigation links. The main content area has an orange background with white text. The "Site Settings" title is in black, and the left navigation bar features black text for categories like "Documents" and "Users and Permissions".

**Black Theme:** The bottom-right screenshot shows a black header bar with the "Adventure Works" logo and navigation links. The main content area has a black background with white text. The "Site Settings" title is in black, and the left navigation bar features black text for categories like "Documents" and "Users and Permissions".

In all themes, the right-hand side of the Site Settings page contains sections for "Users and Permissions", "Look and Feel", and "Site Information". The "Look and Feel" section includes links for "Welcome Page", "Title, description, and icon", "Master page", "Page layouts and site templates", "Tree view", "Site theme", and "Navigation". The "Site Information" section shows the "Site URL" as <http://portal.contoso.com/> and the "Mobile Site URL" as <http://portal.contoso.com/#!/Mobile>.



# Themes Demo



# Wiki Pages

- Tagging and Ratings
- Team Sites
- Easy page editing / linking
- Text Layouts provide a light version of page layouts
  
- Enterprise Wiki replaces Collaboration Portal
  - Wiki pages + Publishing
  - Page Layouts, Workflows, Master pages, caching, etc



# Wiki Pages

File Edit View History Bookmarks Tools Help

Disable Cookies CSS Forms Images Information Miscellaneous Outline Resize Tools View Source Options

CONTOSO\Administrator

Team - Home Site Settings Editing Tools

Save Check Out Paste Undo Edit Clipboard

Calibri 9.4pt

B I U  $\alpha$   $\beta$   $\gamma$   $\delta$   $\alpha$   $\beta$   $\gamma$   $\delta$

Font Paragraph Styles Spelling

Text Layout One column

One column with sidebar

One column with sidebar A large column on the left with a smaller column on the right.

Two columns with header and footer

Three columns

Three columns with header

Three columns with header and footer

SHAREPOINT 911 THE SHAREPOINT AUTHORITY

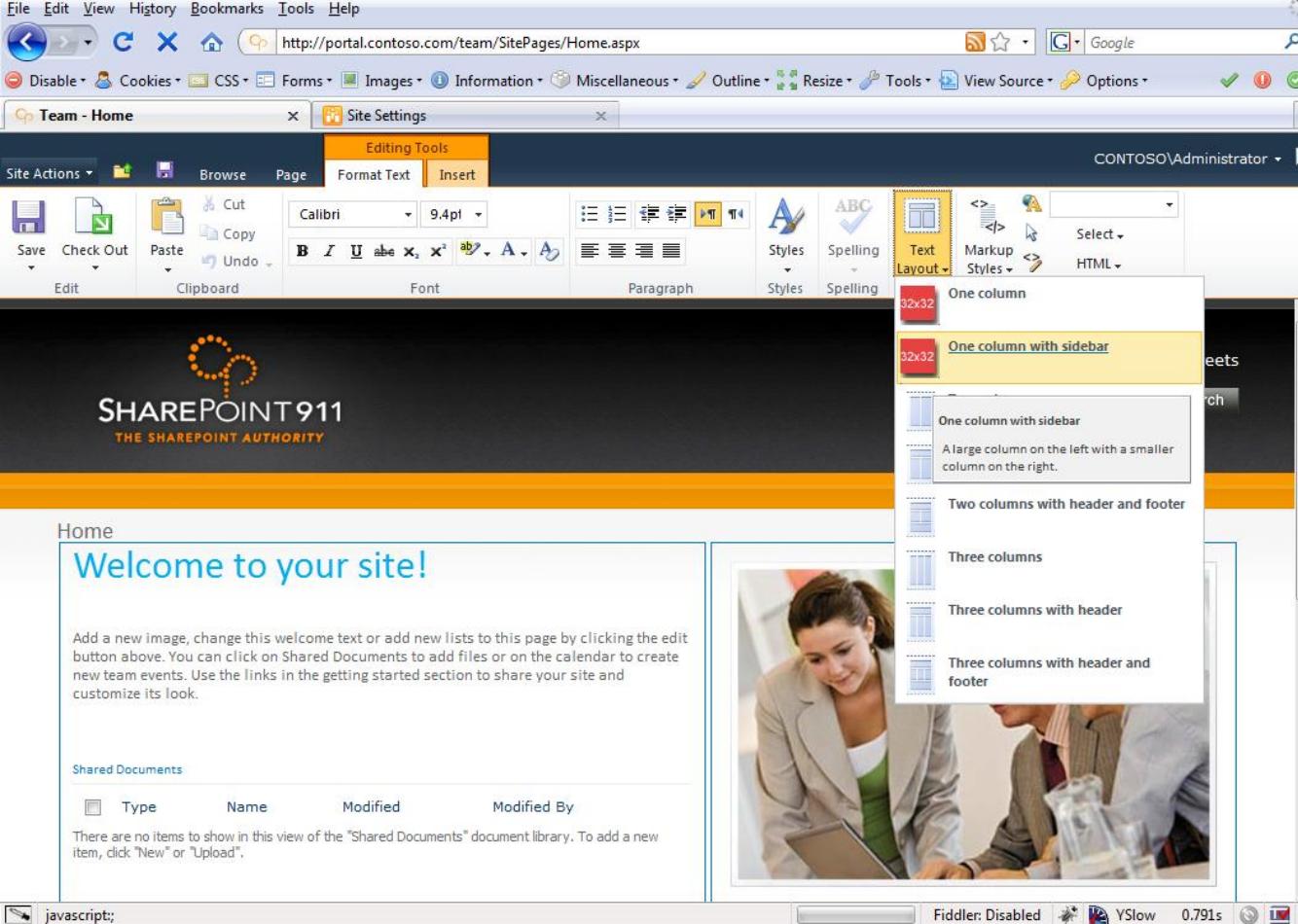
Welcome to your site!

Add a new image, change this welcome text or add new lists to this page by clicking the edit button above. You can click on Shared Documents to add files or on the calendar to create new team events. Use the links in the getting started section to share your site and customize its look.

Shared Documents

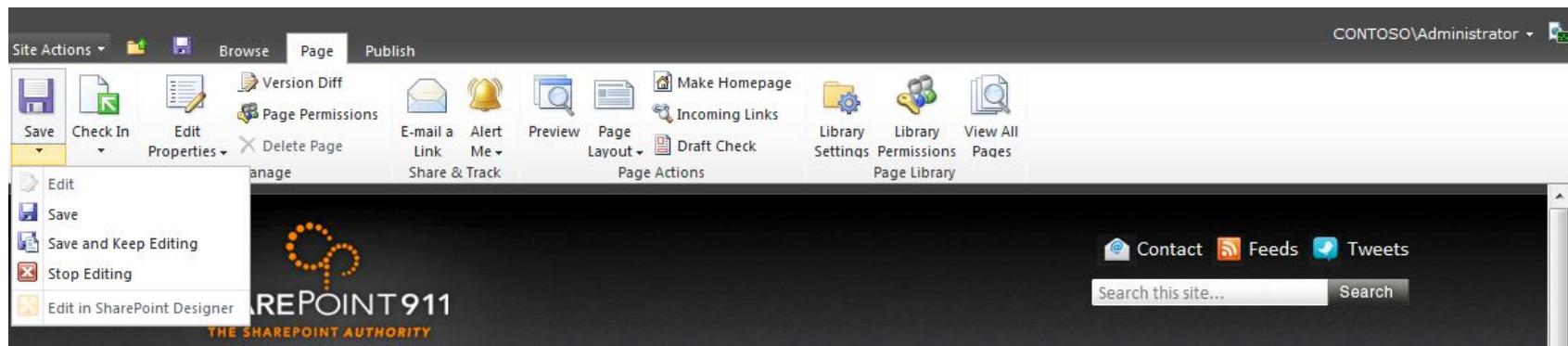
Type	Name	Modified	Modified By
There are no items to show in this view of the "Shared Documents" document library. To add a new item, click "New" or "Upload".			

javascript; Fiddler: Disabled YSlow 0.791s



# The Ribbon

- Contextual user interface
- Can have fixed position or floating
- You can add and remove buttons easily



# Status Bar / Notification Area

- Status bar
  - Below the ribbon
  - Displays color coded messages
  - Can be extended with server or client code
- Notification Area
  - Appears on the right side top
  - Messages show for 5 seconds
  - Can be extended with Server or client code



# Status Bar / Notification Area

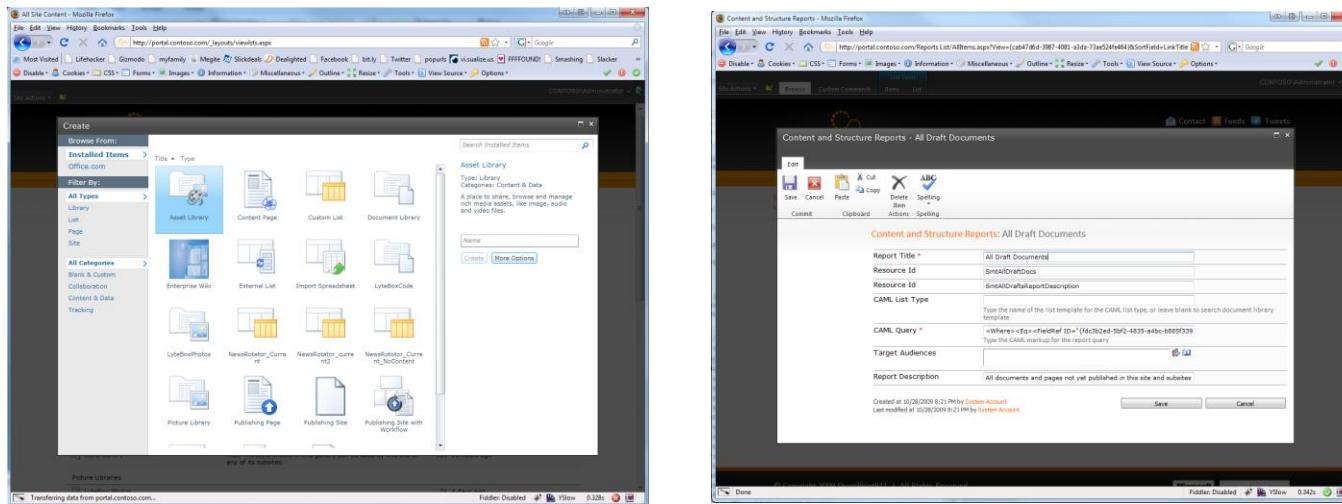
The screenshot shows a SharePoint 2010 page with the following interface elements:

- Top Navigation Bar:** Site Actions, Browse, Page, Publish.
- User Account:** CONTOSO\Administrator.
- Save Buttons:** Save, Check In, Edit Properties, Delete Page, Manage.
- Page Actions:** Version Diff, Page Permissions, E-mail a Link, Alert Me, Preview, Page Layout, Make Homepage, Incoming Links, Draft Check, Library Settings, Library Permissions, View All Pages.
- Notifications:** A red callout bubble labeled "Notifications" points to a "Saving..." message in the status bar.
- SharePoint 911 Logo:** SHAREPOINT 911 - THE AUTHORITY.
- Page Content:** Status Bar (highlighted with a red callout), Status: Checked out and editable. Publication Start Date: Immediately.
- Form Fields:** Title (Home), Page Image (a group of people working).
- Summary Links:** New Link, New Group, Configure Styles and Layout, Reorder.
- Summary Links 2:** New Link, New Group, Configure Styles and Layout, Reorder.



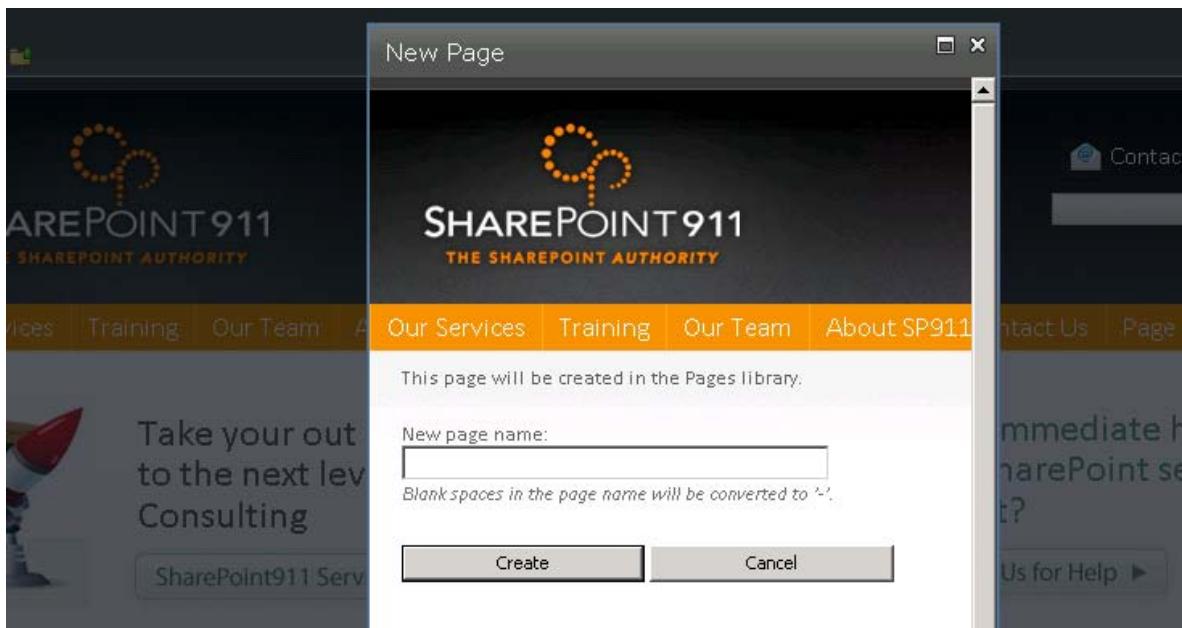
# Dialog Framework

- Often used to add and edit items
- Reduces number of page refreshes
- Dragable, Resizeable
- JavaScript API



# Dialog Framework

- Custom Master Page applies to both the site and the dialogs
  - hide elements of the Master Page with the CSS class “s4-notdlg”



# Visual Upgrade

- Feature available with upgrade, allows server admin to choose 2007 rendering (Visual Upgrade) or 2010 rendering
- Can also be decided on a site by site basis by site owners
- Later can be changed via PowerShell as well



# Visual Upgrade

- Take advantage of SP2010 capabilities sooner
- Not a permanent solution!
- Old OOTB stuff will work
  - OOTB v3 Master pages
  - Themes



team with pub

Welcome CONTOSO\Administrator |

team with pub

Search this site... Give Feedback Site Actions

team with pub

Home Home

Edit | Version Diff | Incoming Links

Welcome to your site!

Add a new image, change this welcome text or add new lists to this page by clicking the edit button above. You can click on Shared Documents to add files or on the calendar to create new team events. Use the links in the getting started section to share your site and customize its look.

View All Site Content

**Documents**

- Site Pages
- Shared Documents

**Lists**

- Calendar
- Tasks

**Discussions**

- Team Discussion

**Recycle Bin**

Shared Documents

Type	Name	Modified	Modified By
There are no items to show in this view of the "Shared Documents" document library. To add a new item, click "New" or "Upload".			

Welcome CONTOSO\Administrator |

team with pub

Site Collection Administration Site Actions

team with pub

## Visual Upgrade

Use this page to control the user interface of sites under this site collection

[Hide Visual Upgrade Options](#)

[Hide Visual Upgrade](#)

Hide options from Site Settings to prevent Visual Upgrade in all sites in this site collection.

[Update All Sites](#)

Use the latest SharePoint user interface on all sites in this site collection.

[Cancel](#)



# Other New Features

- Silverlight
  - Silverlight web parts allows easy Silverlight
- Client Object Model
  - Client side JavaScript API to work with SharePoint programmatically
- Content Query Web Part Enhancements
  - Filter based on page fields
  - NO NEED TO SPECIFY CommonViewFields



# Other New Features

- Multi-lingual User Interface (MUI)
  - Alternate languages for various UI elements
  - Enabled once Language Packs are installed
- Digital Assets
  - Asset Library – optimized for digital assets
  - Media Web Part – Silverlight video player
  - Media Field Control
  - Media in Content Query Web Part



# SharePoint Designer 2010

- Still very affordable – 
- Can be more restricted by Admins
- New Ribbon UI
- Can create Lists, pages, sites, content types, site columns
- Other features
  - Reusable workflows
  - Business data sources
- [www.microsoft.com/spd](http://www.microsoft.com/spd)
- SPD 2010 Beta - <http://bit.ly/7G9rCY>



Code View Tools

File Home Insert Layout Style View Edit

(Default Font) (Default Size) (None)

B I U abe x<sup>2</sup> A<sup>2</sup> A<sup>2</sup>

Font Paragraph Preview in Browser Preview

Find Replace Select Advanced Mode Skewer Quick Tag Editor ABC Spelling Proofing

Navigation Portal sp911\_v4f.master

Site Objects

- Portal
- Lists and Libraries
- Workflows
- Site Pages
- Site Assets
- Content Types
- Site Columns
- External Content Types
- Data Sources
- Master Pages
- Page Layouts
- Site Groups
- Subsites

All Files

http://portal.contoso.com

- Events
- PressReleases
- Search
- team
- \_catalogs
  - It (List Template Ga
  - masterpage (Master
    - Editing Menu
    - en-us
    - Forms
  - Preview Image:
    - ArticleLeft.aspx
    - ArticleLinks.aspx
    - ArticleRight.aspx
    - BlankWebPartP
    - custom\_active
    - default.master

1 <%@ Master language="C#" %>  
2 <!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Strict//EN" "http://www.w3.org/TR/xhtml1/DTD/xhtml1-strict.dtd">  
3 <%@ Import Namespace="Microsoft.SharePoint" %>  
4  
5 <%@ Register Tagprefix="SharePoint" Namespace="Microsoft.SharePoint.WebControls" Assembly="Microsoft.SharePoint, Version=14.0.0.0, Cultu  
6 <%@ Register Tagprefix="WebPartPages" Namespace="Microsoft.SharePoint.WebPartPages" Assembly="Microsoft.SharePoint, Version=14.0.0.0, Cu  
7 <%@ Register TagPrefix="wssuc" TagName="Welcome" src="/\_controltemplates/Welcome.aspx" %>  
8 <%@ Register TagPrefix="wssuc" TagName="DesignModeConsole" src="/\_controltemplates/DesignModeConsole.aspx" %>  
9 <%@ Register TagPrefix="wssuc" TagName="MUISelector" src="/\_controltemplates/MUISelector.aspx" %>  
10 <%@ Register Tagprefix="PublishingWebControls" Namespace="Microsoft.SharePoint.Publishing.WebControls" Assembly="Microsoft.SharePoint.Pu  
11 <%@ Register Tagprefix="PublishingNavigation" Namespace="Microsoft.SharePoint.Publishing.Navigation" Assembly="Microsoft.SharePoint.Publ  
12 <html xmlns="http://www.w3.org/1999/xhtml" lang="<%\$Resources:wss,language\_value %>" dir="<%\$Resources:wss,multipages\_direction\_dir\_valu  
13 <head runat="server">  
14  
15 <meta http-equiv="Content-Type" content="text/html; charset=utf-8"/>  
16 <meta http-equiv="Expires" content="0"/>  
17 <meta http-equiv="X-UA-Compatible" content="IE=8"/>

[HyperLink]

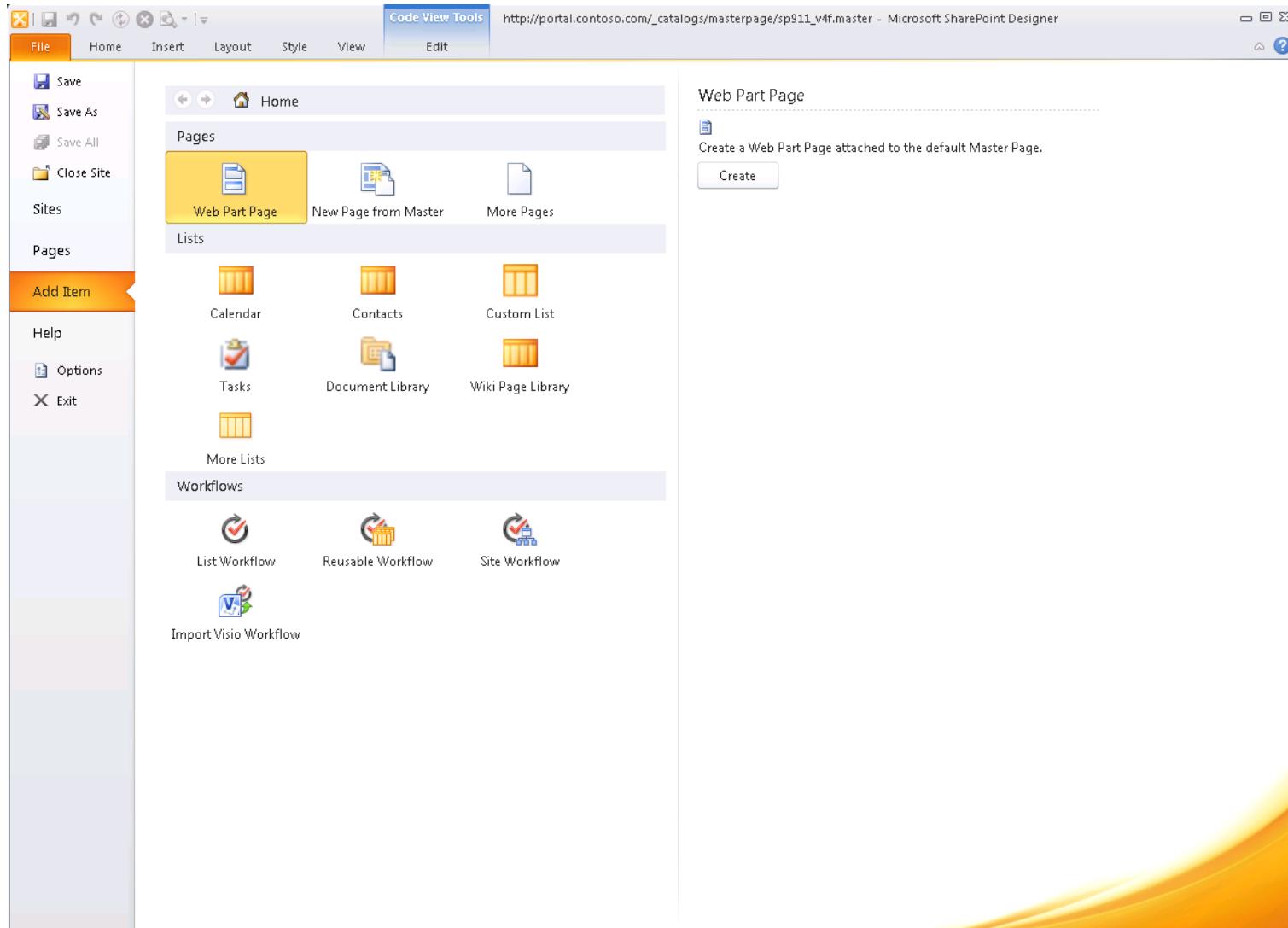
User Login

Contact Feeds Tweets

Press Releases Test3 Heading Item1 Events Team Our Team Home

Portfolio

Line 9, Column 62 Visual Aids: On Style Application: Auto 28.6 KB Standard 993 x 297 XHTML 1.0 S CSS 2.1



# Approaches to Branding in SP2010

- Low Effort
  - Use the out of the box branding
  - V4.master, NightAndDay.master, OOTB Themes
- Medium Effort
  - Create a custom Theme
  - Create Alternate CSS
- High Effort
  - Custom Master Pages, Page Layouts, custom CSS
  - Good for public internet sites, employee portals, partner extranets, etc.



# Alternate CSS + Theme Demo



# Recreating in Your Environment

- Create a wide header graphic
- Apply header with Alternate CSS
- Add a logo by setting the site icon
- Create a theme with Office and import into SharePoint and apply it to the site



# Can I upgrade my branding?

Definitely without a doubt – with some work

- Visual Upgrade
- Converting v3 Master Pages
- Custom themes?



# Converting Existing Master Pages

- Check DOCTYPE
  - XHMTL 1.0 Strict
- Add the IE=8 meta tag
  - <meta http-equiv="X-UA-Compatible" content="IE=8"/>
- Assembly registrations change from 12 to 14 but SharePoint 2010 handles it for you
- Check required Placeholders
  - All required: <http://bit.ly/3xapTl>
  - New Placeholders
    - PlaceHolderQuickLaunchTop
    - PlaceHolderQuickLaunchBottom



# Converting Existing Master Pages

- Remove 2007 Controls
  - Site Actions, Breadcrumb, Login / Welcome, Editing Consoles
- Add required 2010 controls
  - <SharePoint:SPPageManager runat="server"/>
  - <SharePoint:ULSClientConfig runat="server"/>
  - <asp:ScriptManager id="ScriptManager" runat="server" EnablePageMethods="false" EnablePartialRendering="true" EnableScriptGlobalization="false" EnableScriptLocalization="true" />
- Add Ribbon from v4 Master Page



# Converting Existing Master Pages

- Sticking the Ribbon to the top

```
<div ID="s4-workspace">
 <div ID="s4-bodyContainer">
 Content
 </div>
</div>
```

- Allow SharePoint to manage scrolling

```
<script type="text/javascript">var _fv4UI = true;</script>
<body scroll="no">
 Body Content
</body>
CSS: body { overflow: hidden; }
```



# Converting Existing Master Pages

- Hide custom branding from Dialog Boxes

```
class="s4-notdlg"
```

- Add status bar

```
<div id="s4-statusbarcontainer" class="s4-notdlg">
 <div id="pageStatusBar" class="s4-status-s1"></div>
</div>
```

- Use new search box from v4 master page

```
<SharePoint:DelegateControl runat="server"
 ControlId="SmallSearchInputBox" Version="4"/>
```



- Use 2010 cleaner navigation

```
UseSimpleRendering="true"
```

- Add left navigation for site settings
- Tweak CSS styles to taste

```
<SharePoint:CssRegistration name="/Style
Library/sp911/updates.css" After="corev4.css"
runat="server"/>
```



# Starting a New SharePoint 2010 Master Page

- The 2007 term “Minimal Master Page” has been replaced with “Starter Master Page”
- My SharePoint Server 2010 and SharePoint Foundation 2010 Starter Master Pages:
  - <http://startermasterpages.codeplex.com/>
- VERY Minimal Starter Master Page from Microsoft:
  - <http://code.msdn.microsoft.com/odcSP14StarterMaster>



# Starter Master Page

Site Actions

CONTOSO\sp\_admin

SiteName Logo

Search this site...

Home

about this wiki

home

Last modified at 11/18/2009 3:09 PM by CONTOSO\Administrator [\[Edit this page\]](#)

Use the Enterprise Wiki to create a single, go-to place for knowledge sharing and project management across the enterprise. Enterprise Wikis are simple to use, flexible, and lightweight in features. They are quick and easy to create, and you can easily add links to other information systems, corporate directories, or applications. By using an Enterprise Wiki, you can avoid e-mail overload, provide structure to new and existing information, and encourage collaboration. This helps build consensus among team members.

Working with content - text, graphics or video - is as easy as working in any word processing application, such as Microsoft Word. Use the Rich Text Editor to enhance the formatting of content, apply styles to text, reorganize or spell check your content, insert and format tables, and embed graphics or video. You can do all these things without leaving the wiki page.

Other things you can do when working with Enterprise Wikis:

- Collaborate on wiki pages with other users
- Comment on a wiki page to enable discussion about the contents of the page
- Rate a wiki page to share your opinion about its content
- Categorize wiki pages to enable users to quickly find information and share it with others

Page Rating   
Categories test

© Copyright 2009 SiteName

# Summary

- Terminology
- SP2010 UX Overview
- Branding Enhancements in SP2010
- Approaches to Branding in SP2010
- Getting Started



# **World's Fastest XSLT Primer**



# Agenda

- What is XSLT
- Using XSLT with SharePoint



# What is XSLT

- XSLT = Extensible Stylesheet Language Transformations
- What does that mean?
  - An XML language that converts another XML document to various Human Readable formats
  - One common use is taking raw XML in and sending styled HTML out
- Why XSLT?
  - Separation of data from the display
  - Same XML could be seen as HTML or WAP or whatever



# What is XSLT

- Sample XML:

```
<?xml version="1.0" encoding="ISO-8859-1"?>
<?xml-stylesheet type="text/xsl" href="style.xsl"?>
<books>
 <book>
 <title>Professional SharePoint 2007 Design</title>
 <url>http://www.amazon.com/exec/obidos/ASIN/047028580X</url>
 </book>
 <book>
 <title>Real World SharePoint 2007</title>
 <url>http://www.amazon.com/exec/obidos/ASIN/0470168358</url>
 </book>
</books>
```



# What is XSLT

- Sample XSLT:

```
<?xml version="1.0" encoding="UTF-8"?>
<xsl:stylesheet version="1.0" xmlns:xsl="http://www.w3.org/1999/XSL/Transform">
 <xsl:output method="html"/>
 <xsl:template match="/books">
 <table>
 <xsl:for-each select="book">
 <tr>
 <td><a><xsl:attribute name="href"><xsl:value-of select="url"/></xsl:attribute>Link</td>
 <td><xsl:value-of select="title"/></td>
 </tr>
 </xsl:for-each>
 </table>
 </xsl:template>
</xsl:stylesheet>
```

Would look like this in the browser:

[Link](#) Professional SharePoint 2007 Design

[Link](#) Real World SharePoint 2007



# Using XSLT with SharePoint

- Many of the SharePoint Web Parts use XSLT for styling
- Content Query Web Part uses styles in the Style Library > XSL Style Sheets (Header.xsl and ItemStyle.xsl)
  - You have to edit CommonViewFields in the Web Part to see custom columns
  - Enhanced Content Query Web Part:  
<http://www.codeplex.com/ECQWP>



# Using XSLT with SharePoint

- XML Web Part is built for styling XML with XSL
- SharePoint Designer can use the Data View Web Part to build XSLT easily
- Customizing the Search Results Web Part with XSLT:
  - <http://msdn.microsoft.com/en-us/library/ms584121.aspx>



# Summary

- What is XSLT
- Using XSLT with SharePoint

