What's New for Web Forms in Visual Studio 2010?

Paul Litwin
Deep Training &
Fred Hutchinson Cancer Research Center

paul@deeptraining.com
blog.paullitwin.com
twitter.com/plitwin

MICROSOFT
ASP.NET & SILVERLIGHT
conference and expo

Paul Litwin

- **Developer**
  - Focus: ASP.NET, ASP, C#, SQL Server, Reporting Services
  - MCSD
  - Microsoft MVP
  - Programmer Manger with
    Fred Hutchinson Cancer Research Center (Seattle)
- **Co-Founder and Senior Trainer**
  - Deep Training
    - www.deeptraining.com
- **Conference Chair/Speaker**
  - Chair, Microsoft ASP.NET Connections
  - Member INETA Speakers Bureau
- **Author of over a dozen books & courses, including…**
    - *AppDev SQL Server 2005 & 2008 Reporting Services Courses*
    - *ASP.NET for Developers*
    - *Access Cookbook*
    - *Access 2002 Desktop/Enterprise Dev Handbook*

MICROSOFT ASP.NET & SILVERLIGHT conference and expo

Updated Slides & Samples Download

- You can download them from:
  - www.deeptraining.com/litwin

MICROSOFT
ASP.NET & SILVERLIGHT
conference and expo

Agenda

- **Web.config**
- Client-Side IDs
- SEO
- View State
- CSS
- Controls
- Other improvements

MICROSOFT ASP.NET & SILVERLIGHT conference and expo

Web.config 3.5

- ASP.NET 3.5 web.config file is quite big and confusing.
- Default VS 2008 SP1 config file for web site is 167 lines
- Necessary because .NET 3.0 & 3.5 use same CLR & machine.config as .NET 2.0

MICROSOFT
ASP.NET & SILVERLIGHT
conference and expo

Web.config 4.0

- Default VS 2010 config file for ASP.NET web site is 52 lines!
- For ASP.NET Empty web site, it’s down to only 14 lines!

MICROSOFT
ASP.NET & SILVERLIGHT
conference and expo

Agenda

- Web.config
- ➢ **Client-Side IDs**
- SEO
- View State
- CSS
- Controls
- Other improvements

MICROSOFT
ASP.NET & SILVERLIGHT
conference and expo

Client-Side IDs

- Prior versions of ASP.NET gave you little control over the generated client-side IDs
- Made it difficult to write client-side script against control IDs that were decided at run time
- You end up with client-side IDs like

```
ctl00_cphMain_gvCustomers_ctl04_txtContactName
```

MICROSOFT
ASP.NET & SILVERLIGHT
conference and expo

Client-Side IDs

- Developers had to resort to hacks like this…

```
<script type="text/javascript">
   function csfun() {
      alert('<%=txtName.ClientID%>');
   }
</script>
```

MICROSOFT
ASP.NET&
SILVERLIGHT
conference and expo

Client-Side IDs

- ASP.NET 4 introduces ClientIDMode property of controls and pages
  - Possible values of ClientIDMode
    - **AutoID** – works like prior versions (default for page)
      - ctl00_cphMain_gvCustomers_ctl04_txtContactName
    - **Inherit** – inherits from control's parent (default for controls)
    - **Static** – whatever you put in ID property becomes client-side ID; use with caution because you have to guarantee uniqueness
      - txtContactName
    - **Predictable** – creates IDs in predictable manner. Use with ClientIDRowSuffix for databound controls
      - cphMain_gvCustomers_txtContactName_ANTON

      -or-
      - cphMain_gvCustomers_txtContactName_2

MICROSOFT
ASP.NET & SILVERLIGHT
conference and expo

Client-Side IDs

- Predictable Mode and DataBound controls
  - ClientIDSuffix can be set to one or more fields
  - ASP.NET substitutes field values for each row
  - If ClientIDSuffix not set, then ASP.NET uses row ID

MICROSOFT
ASP.NET&
SILVERLIGHT
conference and expo

Agenda

- Web.config
- Client-Side IDs
- ➢ **SEO**
- View State
- CSS
- Controls
- Other improvements

MICROSOFT
ASP.NET & SILVERLIGHT
conference and expo

SEO Improvements

- SEO = Search Engine Optimization
- ASP.NET 4.0 Improves SEO
  - Page MetaKeywords
  - URL Routing
  - RedirectPermanent

MICROSOFT
ASP.NET & SILVERLIGHT
conference and expo

Page MetaKeywords

```
protected void Page_Load(object sender, EventArgs e)
{
    Page.Title = "Northwind Customers"; // could do this before
    Page.MetaDescription = "List of all customers from Northwind DB"; // new
    Page.MetaKeywords = "MetaKeywords, MetaDescription, MegaKewl"; // new 2
}
```

```
<%@ Page Language="C#" MasterPageFile="~/Site.Master"
    AutoEventWireup="true" CodeBehind="FVDemo.aspx.cs"
    Inherits="WhatsNewInWebForms4.FVDemo"
    Title="Form View Demo"
    MetaDescription="Edit Northwind Customers using FormView"
    MetaKeywords="FormView, Northwind, Customers, ASP.NET 4.0" %>
```

MICROSOFT
ASP.NET & SILVERLIGHT
conference and expo

URL Routing

- Big part of MVC is its routing engine
- ASP.NET 4.0 adds MVC-style routing to Web Forms

MICROSOFT
ASP.NET&
SILVERLIGHT
conference and expo

URL Routing

- Big part of MVC is its routing engine
- ASP.NET 4.0 adds MVC-style routing to Web Forms
- Lets you use nice clean-looking URLs in lieu of URLs with lots of query string values

MICROSOFT
ASP.NET&
SILVERLIGHT
conference and expo

URL Routing

- Why use SEO with Web Forms?
  - Cause it looks cool?
  - Search Engine Optimization (SEO)

MICROSOFT
ASP.NET & SILVERLIGHT
conference and expo

URL Routing in Web Forms

- In Global.asax

```
void RegisterRoutes(RouteCollection routes)
{
    routes.MapPageRoute(
        "employeedrilldown",
        "Employee/{EmployeeID}",
        "~/RoutedEmpDetails.aspx"
        );
}

protected void Application_Start(object sender, EventArgs e)
{
    RegisterRoutes(RouteTable.Routes);
}
```

MICROSOFT
ASP.NET & SILVERLIGHT
conference and expo

URL Routing in Web Forms

- And in Route Target page
  - Page.RouteData.Values["EmployeeID"].ToString()
  - <asp:RouteParameter Name="EmployeeID" RouteKey="EmployeeID"
  - Response.RedirectToRoute("employeedrilldown“, new { EmployeeID = strIdentityValue });

MICROSOFT
ASP.NET&
SILVERLIGHT
conference and expo

Response.RedirectPermanent

```
Response.RedirectPermanent("newpage.aspx");
```

- Performs redirect using HTTP 301 (moved permanently) response rather than temp HTTP 302
- Causes search engines to store new URL
- Companion Routing redirect method
  - Response.RedirectToRoutePermanent()

MICROSOFT
ASP.NET&
SILVERLIGHT
conference and expo

Agenda

- Web.config
- Client-Side IDs
- SEO
- ➢ **View State**
- CSS
- Controls
- Other improvements

MICROSOFT ASP.NET & SILVERLIGHT conference and expo

View State in Prior Versions

- Prior versions let you opt out of view state at the control level or shut it off for entire page (without exception)
- But what if you wanted it off for all controls except a few that really needed it?

MICROSOFT
ASP.NET&
SILVERLIGHT
conference and expo

View State in ASP.NET 4.0

- ASP.NET 4.0 introduces ViewStateMode
  - Can be set to Enabled, Disabled, or Inherit
  - Default for controls is Inherit
  - Allows you shut off view state at page level (ViewStateMode = Disabled) and then opt in for a select set of controls (ViewStateMode = Enabled)

MICROSOFT
ASP.NET & SILVERLIGHT
conference and expo

Agenda

- Web.config
- Client-Side IDs
- SEO
- View State
- ➢ **CSS**
- Controls
- Other improvements

MICROSOFT
ASP.NET & SILVERLIGHT
conference and expo

CSS Improvements

- Microsoft has done a lot to clean up HTML generated by server-side controls
- New page attribute to control CSS compatibility

```
<pages
 controlRenderingCompatibilityVersion="3.5|4.0"/>
```

- Defaults to 4.0

MICROSOFT
ASP.NET&
SILVERLIGHT
conference and expo

ControlRenderingCompatibilityVersion

- 3.5
  - Legacy rendering and markup
  - setting of *xhtmlConformance* property not honored
- 4.0
  - see next slide

MICROSOFT
ASP.NET & SILVERLIGHT
conference and expo

ControlRenderingCompatibilityVersion

- 4.0
  - xhtmlConformance property treated as Strict
  - Disabling non-input controls no longer renders invalid styles
  - div elements around hidden fields now styled so they do not interfere with user-created CSS rules
  - Menu controls render markup that is compliant
  - Validation controls do not render inline styles
  - Controls that previously rendered border=0, no longer render this attribute

MICROSOFT
ASP.NET & SILVERLIGHT
conference and expo

Agenda

- Web.config
- Client-Side IDs
- SEO
- View State
- CSS
- ➢ **Controls**
- Other improvements

MICROSOFT
ASP.NET & SILVERLIGHT
conference and expo

Control Improvements

- ListView
  - No longer requires a LayoutTemplate

```
<asp:ListView
    ID="lstCustomers"
    DataSourceId="sdsCustomers"
    runat="server">
    <LayoutTemplate>
        <asp:Placeholder id="itemPlaceholder" runat="server" />
    </LayoutTemplate>
    <ItemTemplate>
        <%# Eval("CompanyName") %>
    </ItemTemplate>
    <ItemSeparatorTemplate>
        <hr />
    </ItemSeparatorTemplate>
</asp:ListView>
```

MICROSOFT
ASP.NET & SILVERLIGHT
conference and expo

Control Improvements

- CheckBoxList and RadioButtonList
  - Have additional RepeatLayout options
    - Flow
    - Table
    - *UnorderedList*
    - *OrderedList*
  - Makes HTML more accessible

MICROSOFT
ASP.NET & SILVERLIGHT
conference and expo

Control Improvements

- Menu Control
  - Now renders HTML using semantic markup that consists of an unordered list and list elements
  - More CSS and accessibility friendly

MICROSOFT
ASP.NET & SILVERLIGHT
conference and expo

Control Improvements

- Wizard and CreateUserWizard
  - Now support templates
    - In ASP.NET 3.5 SP1, although you could change the template contents, you still have limited control over the output
    - In *ASP.NET 4,* you can create a LayoutTemplate template and insert PlaceHolder controls

MICROSOFT
ASP.NET&
SILVERLIGHT
conference and expo

Control Improvements

- Chart control now included in the box

MICROSOFT
ASP.NET&
SILVERLIGHT
conference and expo

Agenda

- Web.config
- Client-Side IDs
- SEO
- View State
- CSS
- Controls
- **Other improvements**

MICROSOFT ASP.NET & SILVERLIGHT conference and expo

Other Improvements

- IntelliSense Filtering
  - Filters by %word% instead of word%
  - PascalCaseFiltering
- HTML and JavaScript snippets
  - Type snippet match and press Tab
  - Right-click and select Insert Snippet…
  - Right-click and select Surround With…
  - Select Edit|IntelliSense|…

MICROSOFT
ASP.NET & SILVERLIGHT
conference and expo

Other Improvements

- Smaller Session State
- Larger and Different URLs
- Persisted Row Selection on Data Controls
- HTML-encoding expression
  - <%: expression %>
  - Encoded version of <%= expression %>

MICROSOFT
ASP.NET&
SILVERLIGHT
conference and expo

Thank You!

- Please complete evaluation forms
- Contact: paul@deeptraining.com
- Download updated slides & samples from
  - www.deeptraining.com/litwin

MICROSOFT ASP.NET & SILVERLIGHT conference and expo

Your Feedback is Important

Please fill out a session evaluation form
drop it off at the conference registration desk.

Thank you!

MICROSOFT
ASP.NET & SILVERLIGHT
conference and expo