

What's new in ASP.NET 4

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ASP.NET 4.0

- Web Forms
- AJAX and JavaScript
- MVC
- Core

ASP.NET Web Forms Improvements

– demo

File->New Project

Clean HTML

- Ability to specify client IDs on controls
 - Improves client script and CSS support
 - ClientIdMode = Static, Predictable, Auto, Inherit
- CSS rendering support (removed inline styles)
 - Remove the need to use CSS adapters
 - Defer to CSS and bypass existing style properties
 - Support non-table-based HTML rendering
- ViewState improvements
 - Disable at app/page level, enable per control

Clean HTML

```
<asp:Menu runat="server">
  <Items>
    <asp:MenuItem Text="Home" NavigateUrl="~/Home.aspx">
      <asp:MenuItem Text="About" NavigateUrl="~/about.aspx" />
    </asp:MenuItem>
    <asp:MenuItem Text="Products" NavigateUrl="~/Products.aspx" />
    <asp:MenuItem Text="Categories" NavigateUrl="~/Categories.aspx" />
    <asp:MenuItem Text="Admin" NavigateUrl="~/Admin.aspx" />
  </Items>
</asp:Menu>
```

```
<asp:FormView
  ID="Formview1"
  RenderTable="false"
  runat="server">
```

Improved VS10 Designer CSS Support

- Attribute Selectors
 - h1[title]
 - span[class=example]
 - span[hello="Cleveland"][goodbye="Columbus"]
 - a[rel~="copyright"]
 - *[lang|= "en"]
- "lang" pseudo-class
 - html:lang(fr-ca)
 - html:lang(de)
 - :lang(fr) > Q
 - :lang(de) > Q

Improved VS10 Designer CSS Support

- ":first-child" pseudo-class
 - div > p:first-child
 - p:first-child em
- "inherit" value
 - .container { color: inherit }
 - #menu { font-family: inherit }
- border-color: transparent
- Correct interpretation of invalid selectors
 - body, ,p

URL Routing for Web Forms

- SEO Friendly URL
- Enable clean logical URLs
 - /products/beverages
 - /products/condiments
- Instead of:
 - /products.aspx?category=beverages
 - /products.aspx?category=condiments

– demo

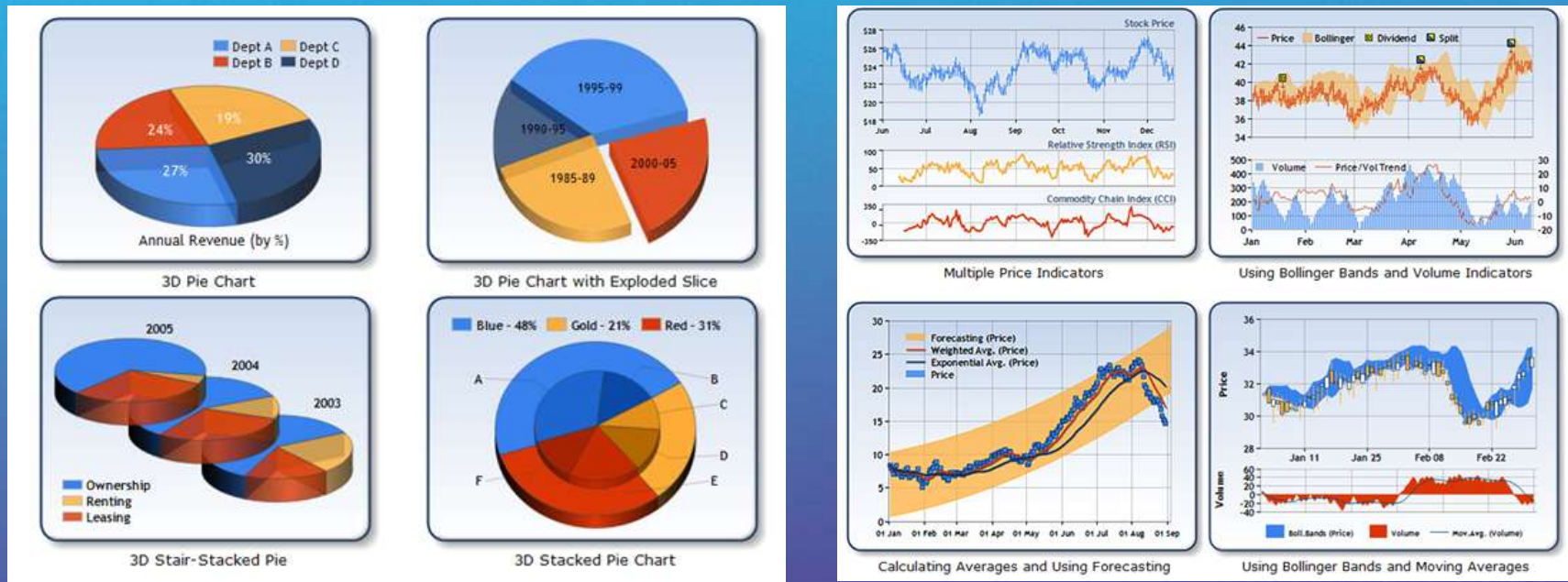
URL Routing

Other SEO Improvements

- New <meta> APIs on Pages:
 - Page.Description
 - Page.Keywords
- New Response.Redirect() methods:
 - Response.RedirectPermanent(*newUrl*)
 - *Response.RedirectToRoute(routeName)*

Data Control Improvements

- `<asp:chart />` now built-into ASP.NET 4.0



- `<asp:QueryExtender />` control
- Enables easier filtering of database results
- Ideal for custom search queries

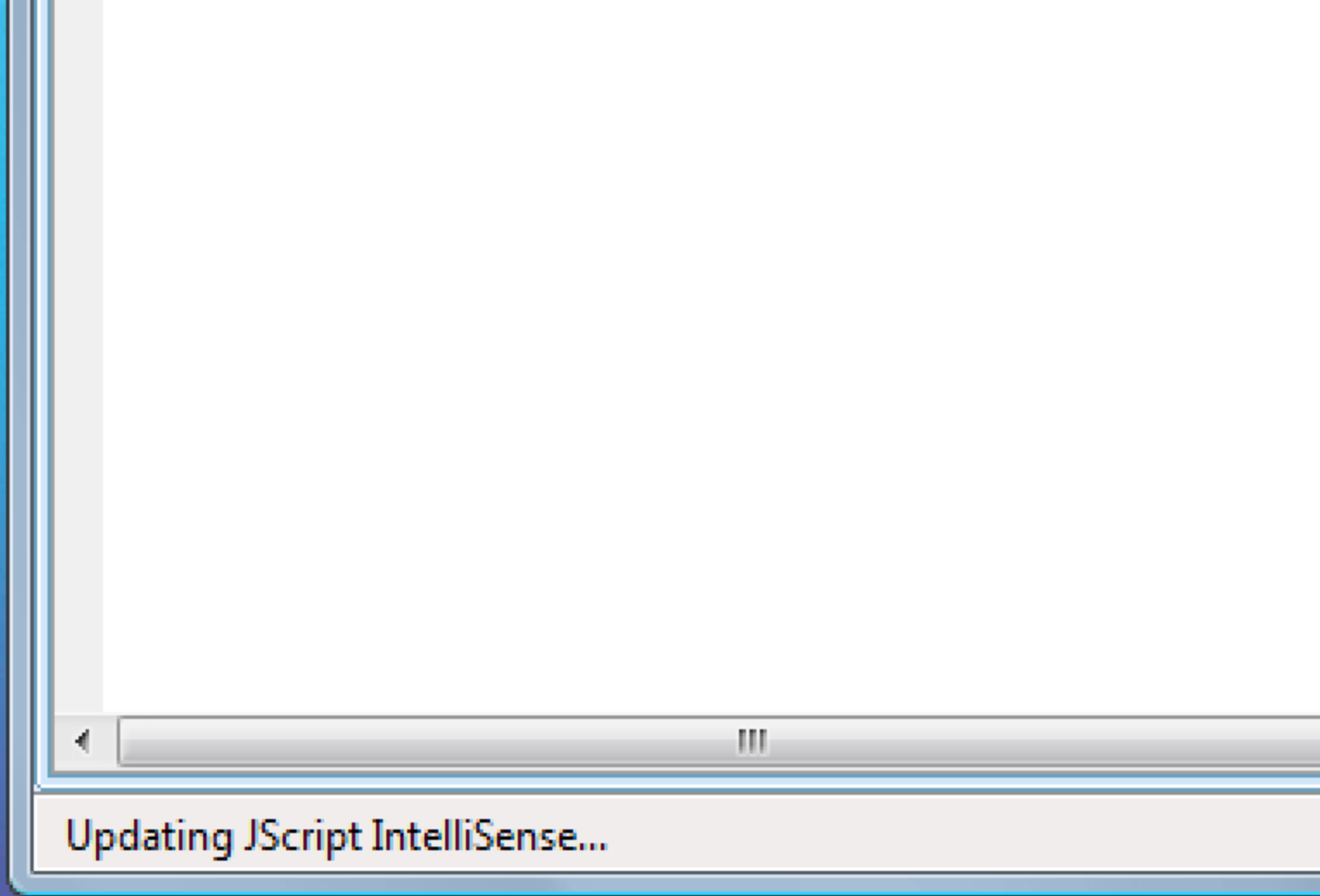
ASP.NET Dynamic Data

- New Field Templates
 - Url, Email, Enumeration
- Entity Templates
 - Easily change look and feel for objects / tables
 - Automatic templates for ListView and FormView
- Many to Many Support
- Inheritance Support
- Model aware validation for all Web Forms controls

AJAX and JavaScript Improvements

VS2010 JavaScript Editing

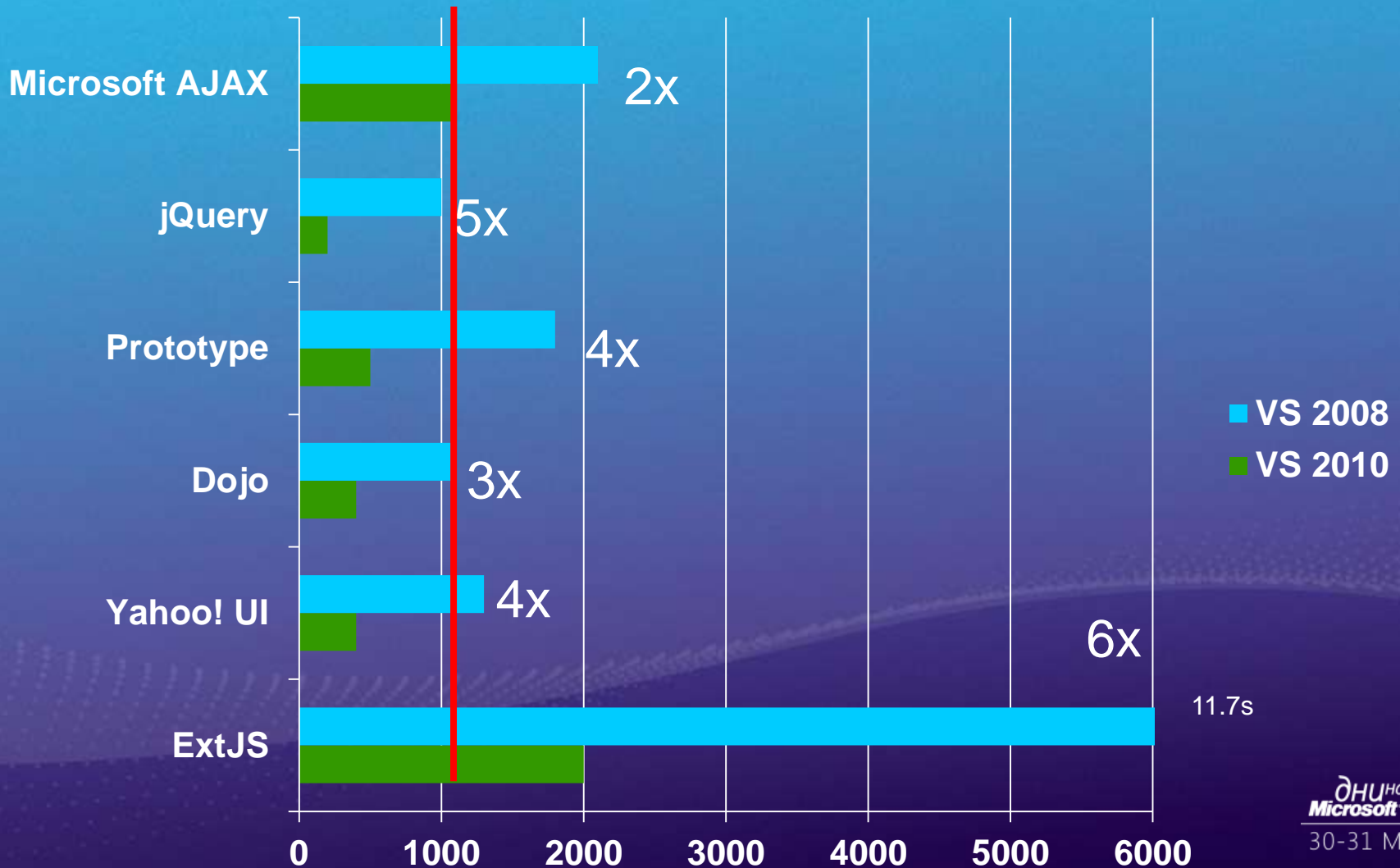
- Faster Updating
- XML Comments work Everywhere
- Richer JavaScript Library Support
- Error Tolerance



Faster Update Speeds

IntelliSense Update Times for Popular Libraries

Time in Milliseconds on Core 2 Duo 2.0 GHz Machine



```
default.aspx*
<%@ Page Language="C#" %>

<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN" "ht
<html xmlns="http://www.w3.org/1999/xhtml">
<head runat="server">
  <script src="jquery-vsdoc.js" type="text/javascript"></script>
  <script src="library.js" type="text/javascript">

    update(
      Boolean update (Number index, String caption)
      index: Index of the photo to update.

  </script>
</head>
<body>
  <form id="form1" runat="server">
    </form>
</body>
</html>
```

```
library.js*
/// <reference path="jquery-vsdoc.js" />

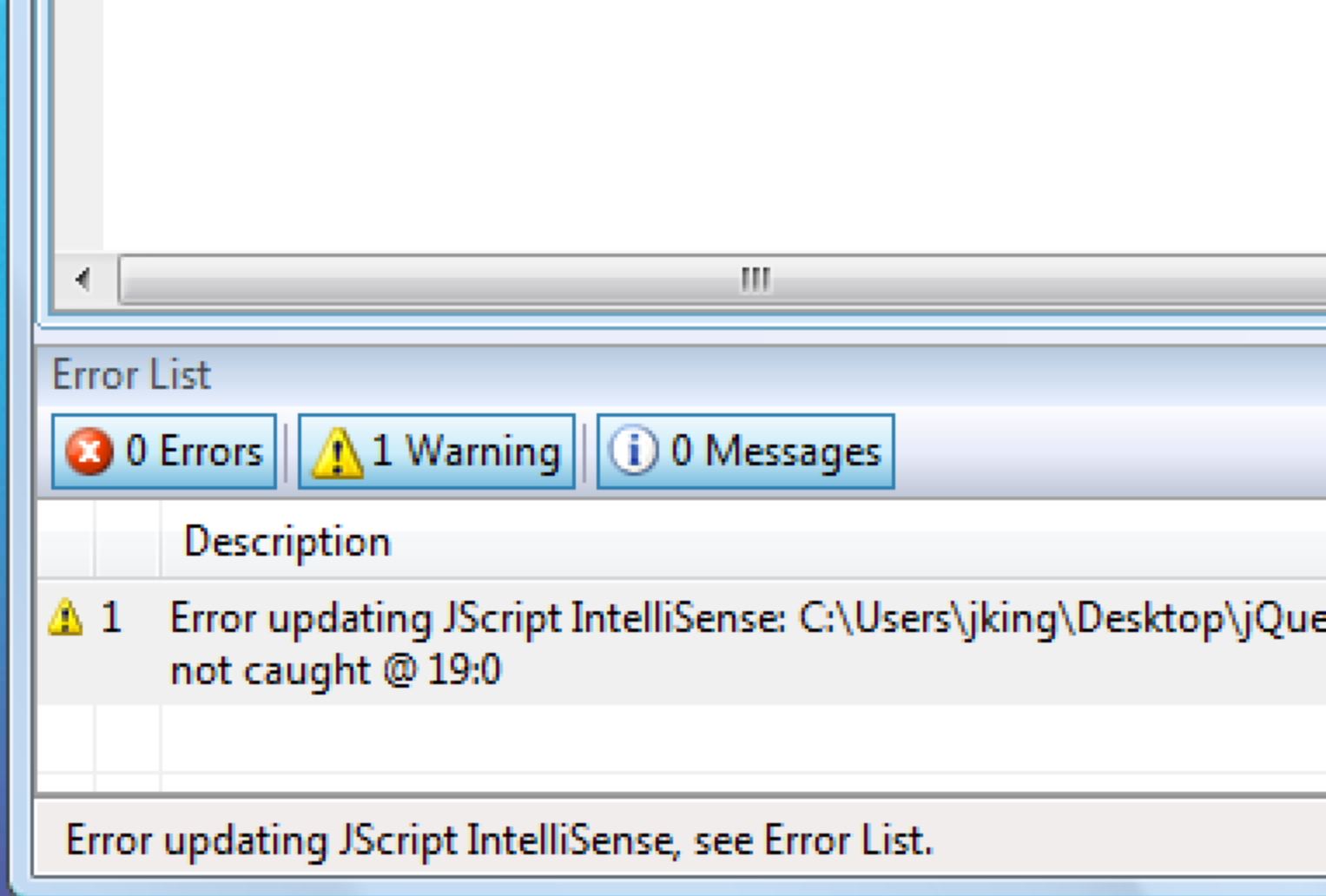
function update(index, caption) {
  /// <summary>
  ///   Adds the caption to the photo at the specified.
  /// </summary>
  /// <param name="index" type="Number">
  ///   Index of the photo to update.
  /// </param>
  /// <param name="caption" type="String"></param>
  /// <returns type="Boolean" />

  update(
    Boolean update (Number index, String caption)
    index: Index of the photo to update.

}

update(
  Boolean update (Number index, String caption)
  index: Index of the photo to update.
```

XML Documentation Comments



Increased Error Tolerance

– demo

JavaScript Intellisense

ASP.NET AJAX

- Rich client side apps
 - Client Side Templates
 - Client Side Controls
 - Client Side Data Binding
 - Refactored Library (much smaller downloads)
- AJAX Control Toolkit
 - Huge library of AJAX Controls

Microsoft AJAX CDN

- Free CDN hosting of AJAX library scripts
 - ASP.NET AJAX 4
 - jQuery and jQuery Validation

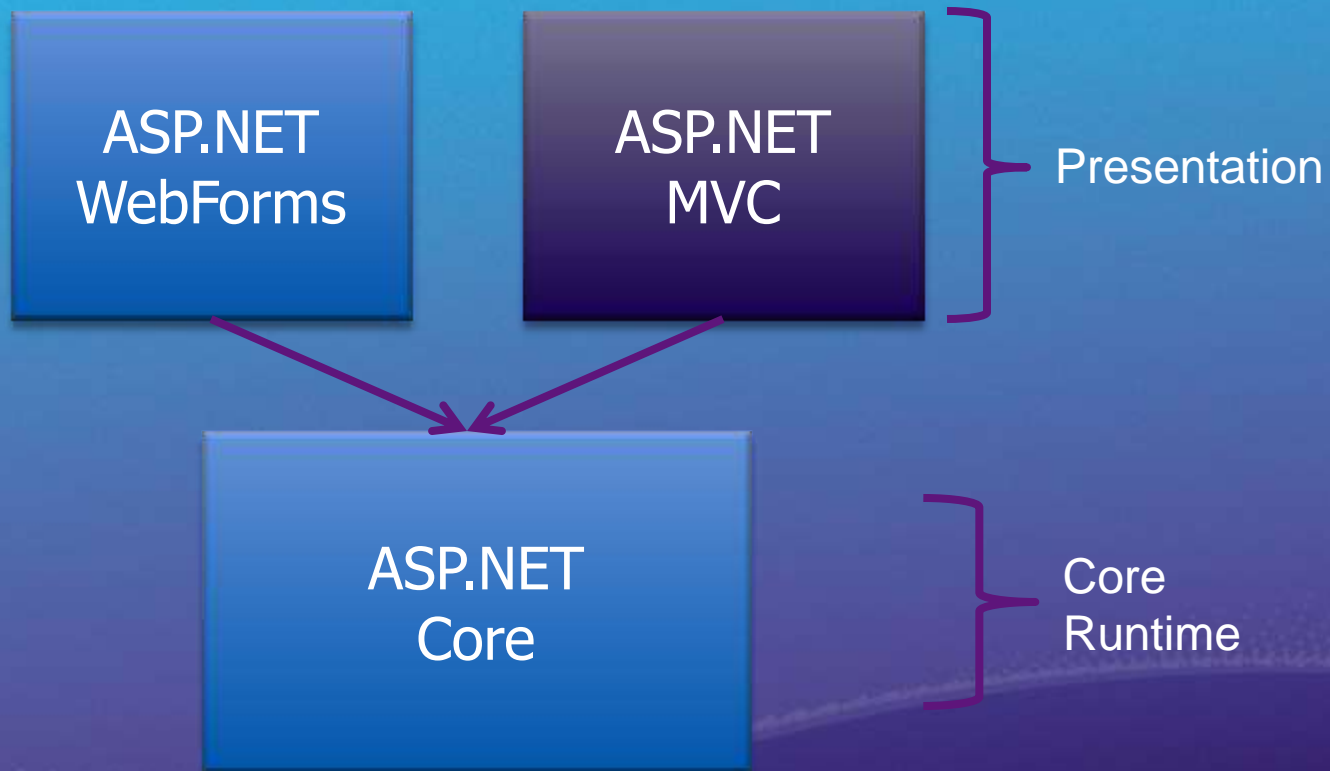
```
<script src="http://ajax.microsoft.com/ajax/jquery/jquery-1.3.2.min.js" type="text/javascript" />
```

- Built-in support with `<asp:scriptmanager>`

```
<asp:ScriptManager  
  ID="ScriptManager1"  
  EnableCdn="true"  
  runat="server" />
```

ASP.NET MVC

All in the Family



ASP.NET MVC

- Total control over your `<html/>`
- Intuitive website URLs
- Client side JavaScript integration
- Unit testing and TDD support

ASP.NET MVC 2

- Validation
- Strongly-Typed HTML Helpers
- Templated HTML Helpers
- Areas
- Asynch Controllers
- Other improvements

– demo

ASP.NET MVC 2

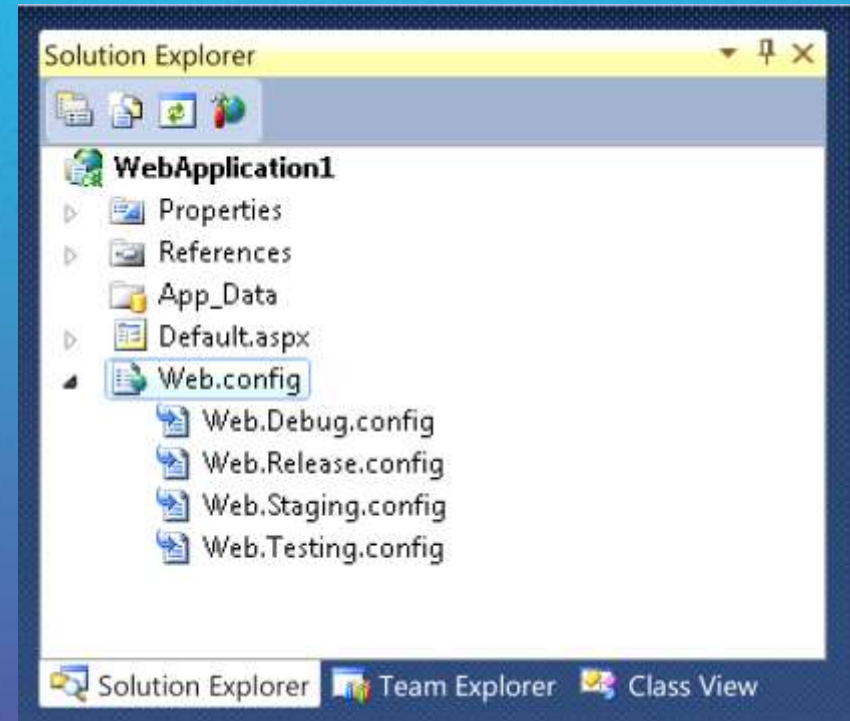
ASP.NET Core Improvements

Core ASP.NET Improvements

- Cache Extensibility
 - Enable disk based caching
 - Integrate with new “Velocity” distributed cache
- Automatically Pre-Start Applications
 - Enable applications to precache/load data
- Perf Monitoring on a per-application basis
- Syntax for automatically HTML encoding
 - `<%: Message %>`

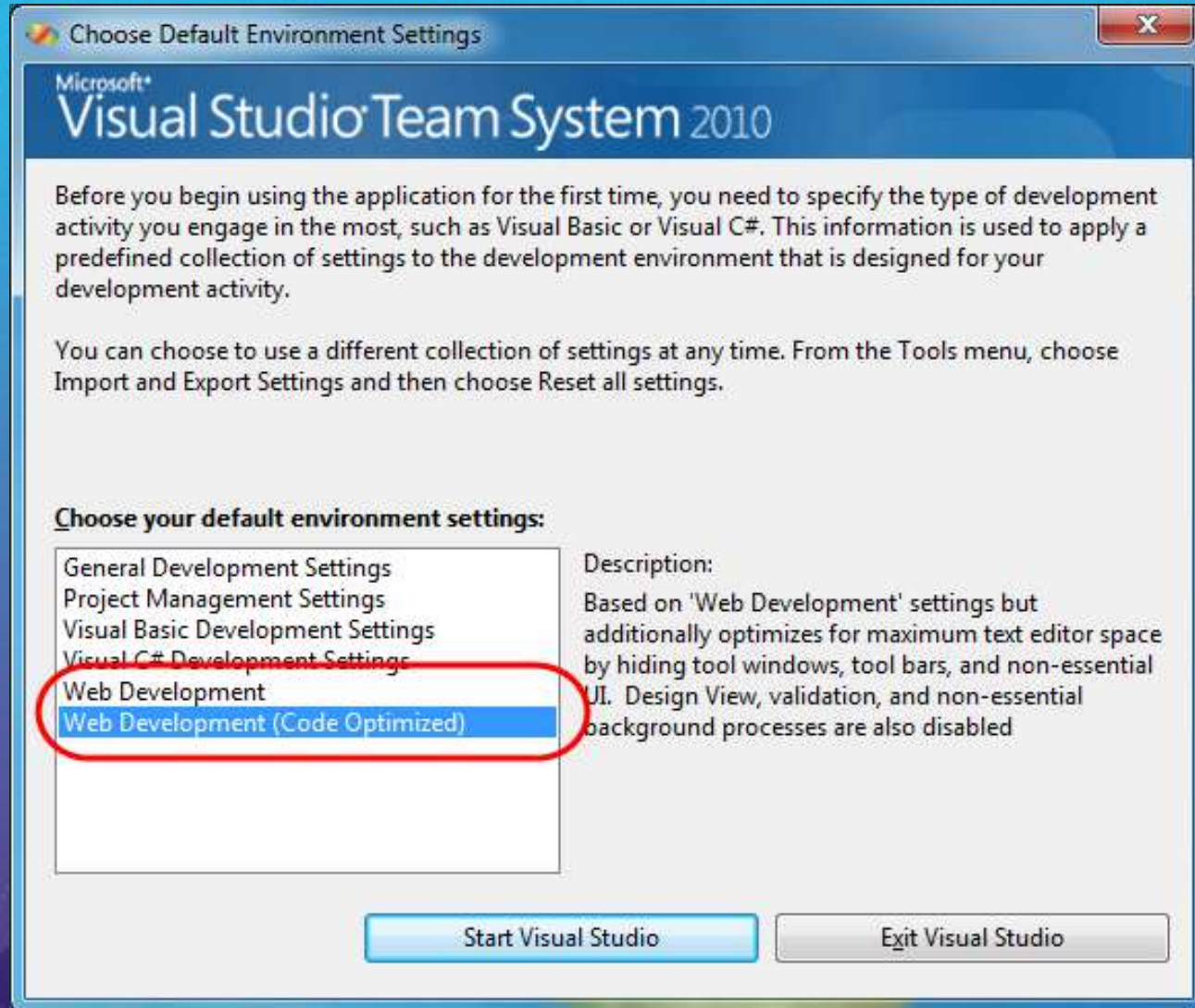
Deployment

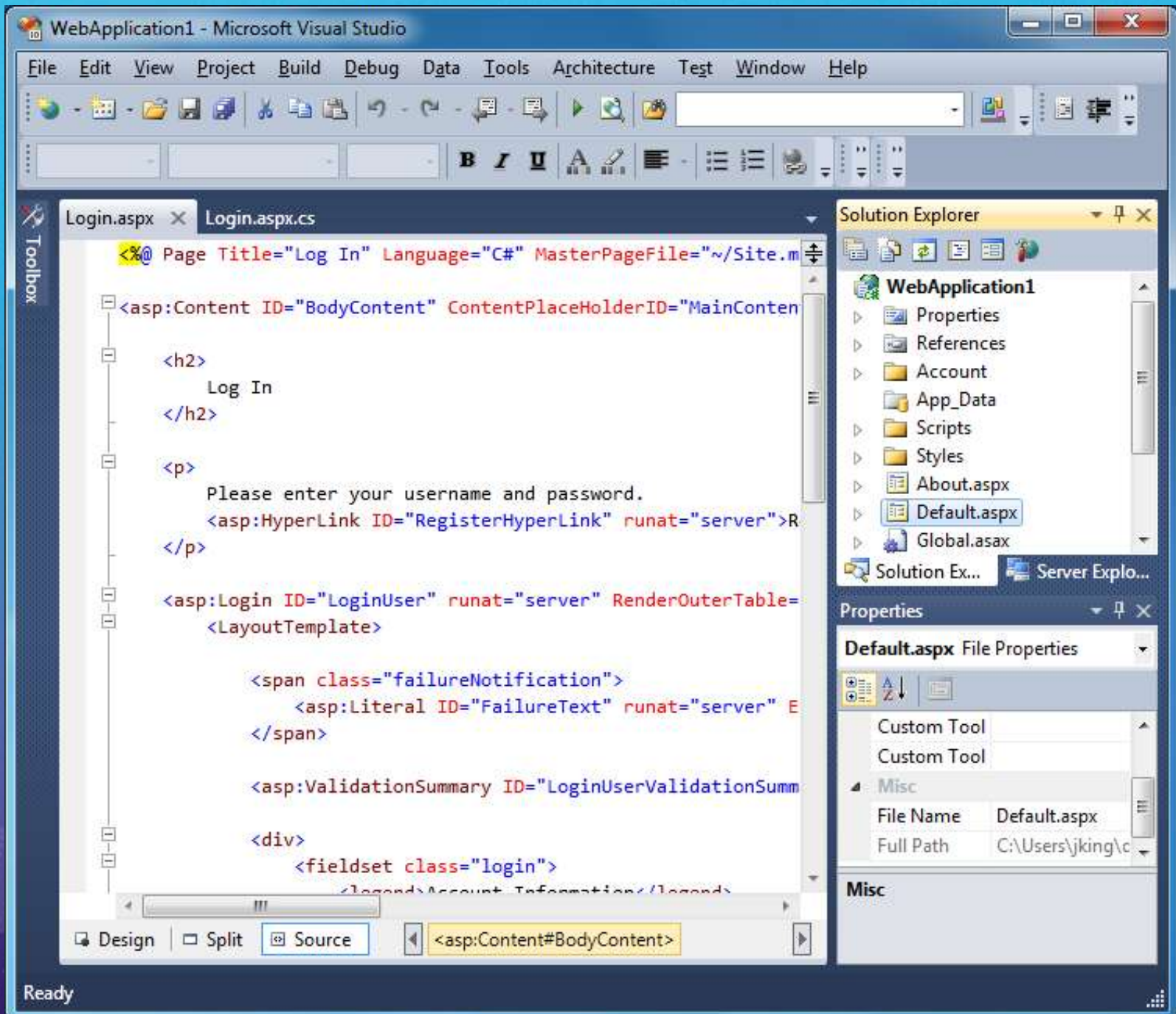
- End to end packaging and deploying of web applications
- Enables customized configurations
- Supports databases, SSL certs, custom registry entries, file ACLs, etc
- Works great with hosted environments



VS 2010 Improvements (bonus)

Code Optimized Web Profile





Login.aspx X Login.aspx.cs

```
<%@ Page Title="Log In" Language="C#" MasterPageFile="~/Site.master" AutoEventWireup="true"
<asp:Content ID="BodyContent" ContentPlaceHolderID="MainContent" runat="server">
    <h2>
        Log In
    </h2>
    <p>
        Please enter your username and password.
        <asp:HyperLink ID="RegisterHyperLink" runat="server">Register</asp:HyperLink> if you
    </p>
    <asp:Login ID="LoginUser" runat="server" RenderOuterTable="false">
        <LayoutTemplate>
            <span class="failureNotification">
                <asp:Literal ID="FailureText" runat="server" EnableViewState="False"></asp:Literal>
            </span>
            <asp:ValidationSummary ID="LoginUserValidationSummary" runat="server" CssClass="
            <div>
                <fieldset class="login">
                    <legend>Account Information</legend>
                    <p>
                        <asp:Label ID="UserNameLabel" runat="server" AssociatedControlID="User
                        <asp:TextBox ID="UserName" CssClass="textEntry" runat="server"></asp
                        <asp:RequiredFieldValidator ID="UserNameRequired" runat="server" Con
                            ErrorMessage="User Name is required." Tooltip="User Name is requ
```

Solution Explorer Server Explorer

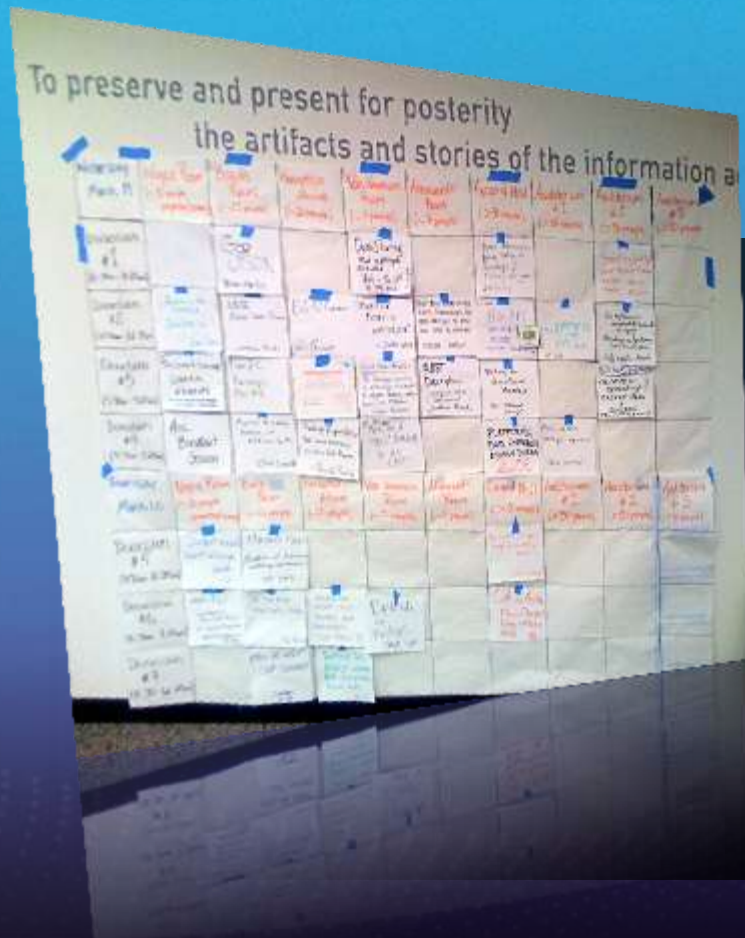
TFS 2010 Improvements

- Easy to install and configure
 - Less than 20 minutes setup experience
 - Now runs on Windows client and Domain Controllers
 - Now supports SQL Express as an option
- Provides integrated team server
 - Source controls
 - Bug / work item tracking
 - Automated build server w/ continuous integration support
- Inexpensive
 - Now included with all MSDN subscriptions

Make Development Easier

- Nail common scenarios
- Make existing things better + cleaner
- Integrate end-to-end
- Enable extensibility and customization

Community Booth



- Become part of our technological communities
- Network with colleagues and experts
- Ask the Experts sessions

Exhibition Area
Level -1

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