SharePoint Web Parts in C#
About the Speaker

• Darrin Bishop
  – Product evangelist for KnowledgeLake
  – Worked with SharePoint Technologies since SPS 2001 Beta 2
  – Writings
    • Rational Guide to SharePoint Web Parts
    • Advisor Guide to SharePoint column editor
    • Advisor Guide to SharePoint author
    • Advisor Guide to SharePoint Editorial Board
    • http://support.knowledgelake.com/CS/blogs/darrin_bishops_workbench/default.aspx
  – Speaking Engagements
    • Exchange Connections 2006
    • St Louis SharePoint User Group
    • St Louis Code Camp
    • Speaking at two more SharePoint conferences in 2006
What is a Web Part

• Part of the User Interface
  ● Included templates for WSS/SPS contain Web Parts

• Extensibility mechanism for WSS/SPS
  ● Integration points with other systems
  ● Surface data to the portal
  ● Extended and modify existing WSS/SPS data

• “Dynamic Web Controls”
  ● Chunks of code that participate in the page lifecycle
  ● Generally renders displayable output
  ● Dynamic, run time configurable and personalizable
Support for Web Parts

• Dynamic Web Parts
  – Drag and Drop
  – Run-time property modification
  – Personalization
  – Customization
  – Server and Client side connections

• Static Web Parts
  – Reuse
  – Functions like a web control
Using Web Parts

Demo
Creating Web Parts

- Web Parts are a type of .Net web control
- Can be developed in any .Net language
- Can be designed by one of two methods
  - Starting with the System.Web.UI.Control type
    - “low level”
    - Requires more code
  - Use Web Part Templates for Visual Studio
    - VS templates for VB.Net and C#.Net
    - Provides most plumbing needed for Web Part
      - References
      - Template code
    - Available from Microsoft web site
Web Parts Pieces

• Three pieces to a Web Part
  – Assembly
    • Where the code resides
    • One or more .NET types inherited from Microsoft.SharePoint.WebPartPages.WebPart type
  – Definition File
    • Xml configuration file
    • Properties about the Web Part
    • One Web Part configuration per file
    • One or more Definition files per Web Part
  – Safe Control Entry
    • web.config entry
    • Marks Web Parts as safe or not safe to render
Setting up the Environment

- Windows SharePoint Services 2.0
- SharePoint Portal Server 2003
  - Team Development White Paper on MS site
  - Local Development
- Visual Studio.NET
- Web Part Templates for VS.NET
- web.config changes
  - Appropriate Trust Level
  - Custom Errors off
  - Debug set True
Creating the Safe Control Entry

Demo
Deploying the Web Part

<table>
<thead>
<tr>
<th>Assembly Location</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIN</td>
<td>Limited permissions</td>
</tr>
<tr>
<td>GAC</td>
<td>Full Permissions, Versioning</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DWP Location</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>File System</td>
<td>Not visible, file level security</td>
</tr>
<tr>
<td>Site Gallery</td>
<td>Available to the site collection</td>
</tr>
<tr>
<td>Virtual Server Gallery</td>
<td>Available to all site collections in the virtual server</td>
</tr>
<tr>
<td>On Line Gallery</td>
<td>Available to all virtual servers configured for the gallery</td>
</tr>
</tbody>
</table>
Demo
Installing into the Site-Level Gallery

Demo