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使用Web Part创建 个性化的ASP.NET 2.0应用程序

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议程

- WebPartManager
- WebPartZones 及 Web Parts
- CatalogZones 及 CatalogParts
- EditorZones 及 EditorParts
- Web Part connections
- Web Part personalization
- 定制 Web Parts

Web Parts

- 构建类门户风格(Portal-Style)的应用的框架
 - 继承自SharePoint Portal Server的成熟模式
 - System.Web.UI.WebControls.WebParts
- 最小的代码创建更丰富的表现
 - 使用拖拽方式创建页面布局
 - Edit appearance and behavior and more
- 无缝实现个性化站点
- 双向通信机制 ("connections")

WebPartManager 控件

- Web Parts的总控中心
 - 管理 Web Parts及区域的列表
 - 管理页面状态 (比如显示状态), 当页面状态时发生改变时触发事件
 - 协助Web Parts间的通讯
 - 管理个性化等
- 每个页面仅有一个实例, 没有UI

```
<asp:WebPartManager ID="WebPartManager1" RunAt="server" />
```

WebPartZone 控件

- 在 Web Parts 页面中定义区域
- 定义每个区域当中 Web Part 的默认显示样式及布局

```
<asp:WebPartZone ID="WeatherZone"
  DragHighlightColor="244, 198, 96" RunAt="server">
  <PartTitleStyle BackColor="#2254B1" ForeColor="White" />
  <PartStyle BorderColor="#81AAF2" BorderStyle="Solid" BorderWidth="1px" />
  <ZoneTemplate>
    <!-- Web Parts declared here -->
  </ZoneTemplate>
</asp:WebPartZone>
```


Web Part 区域

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Layout Editing - Microsoft Internet Explorer

Address: http://localhost:7430/WebParts/EditLayout.aspx

Stocks [Minimize](#) [Close](#)

Symbol	Price	High	Low
MSFT	32.5	24.1	36.2
INTC	32.5	24.1	36.2
AMZN	32.5	24.1	36.2

Weather [Minimize](#) [Close](#)

Partly Cloudy

Temperature: 76 F
Humidity: 44%
Pressure: 1,024 mbar

News [Minimize](#) [Close](#)

Peace Rally Marred by Shootings
Violence broke out at a San Francisco peace rally staged to promote tolerance and goodwill

President Bush: "England is Next"
President Bush, speaking to a group of WWII veterans, had choice words for Prime Minister Blair of England

President Bush: "France is Next"
President Bush, after realizing that he confused England with France, followed up with a terse warning to President Chirac of France

Spam King Given 190 Life Sentences
Judge says "enough is enough" after receiving 36,832 Viagra e-mails in just five days

Ethics Official Jailed for Embezzlement
High-profile case in Philadelphia reveals dangers of allowing foxes to guard the henhouse

Search [Minimize](#) [Close](#)

Calendar [Minimize](#) [Close](#)

July		August 2004					September	
Sun	Mon	Tue	Wed	Thu	Fri	Sat		
25	26	27	28	29	30	31		
1	2	3	4	5	6	7		
8	9	10	11	12	13	14		
15	16	17	18	19	20	21		
22	23	24	25	26	27	28		
29	30	31	1	2	3	4		

区域1

区域2

Web Part Chrome

- 标题框及Web Part的边框
- 通过 WebPartZone 定义其外观



Web Parts

- 在 WebPartZone中定义的控件
 - Web controls, user controls, custom controls
- 未实现IWebPart接口的控件将封装进 GenericWebParts
 - 增加以下属性: Title, Description, etc.

```
<ZoneTemplate>  
  <asp:Calendar Title="Calendar" ID="Calendar1" RunAt="server" />  
  <user:Weather Title="Weather" ID="Weather1" RunAt="server" />  
  <custom:Search Title="Search" ID="Search1" RunAt="server" />  
</ZoneTemplate>
```


Web Parts

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股票
Web Part

新闻
Web Part

天气预报
Web Part

搜索
Web Part

日历
Web Part

The screenshot shows a Microsoft Internet Explorer window titled "Layout Editing - Microsoft Internet Explorer". The address bar displays "http://localhost:7430/WebParts/EditLayout.aspx". The page contains several web parts, each with a "Minimize" and "Close" link in the top right corner. The web parts are:

- Stocks Web Part:** A table with columns: Symbol, Price, High, Low. It lists three stocks: MSFT, INTC, and AMZN, all with a price of 32.5, high of 24.1, and low of 36.2.
- Weather Web Part:** Displays weather information for "Partly Cloudy". It shows a temperature of 76 F, humidity of 44%, and pressure of 1,024 mbar.
- News Web Part:** Displays a list of news headlines. The first headline is "Peace Rally Marred by Shootings" with a sub-headline "Violence broke out at a San Francisco peace rally staged to promote tolerance and goodwill". Other headlines include "President Bush: 'England is Next'", "President Bush: 'France is Next'", "Spam King Given 190 Life Sentences", and "Ethics Official Jailed for Embezzlement".
- Search Web Part:** A simple search interface with a text input field and a "Search" button.
- Calendar Web Part:** Displays a calendar for August 2004. It shows the days of the week (Sun to Sat) and the dates (1 to 31). The date 4 is highlighted.

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Web Parts

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WebPartManager.DisplayMode

- 设置或者获取页面的显示模式

值	描述
BrowserDisplayMode	“正常的”显示模式，无法编辑（默认）
DesignDisplayMode	允许拖拽式布局编辑
EditDisplayMode	允许编辑 Web Part 的外观及行为
CatalogDisplayMode	允许将 Web Part 添加在另外的页面上
ConnectDisplayMode	允许 Web Parts 之间进行通讯

DisplayMode 事件

- **WebPartManager.DisplayModeChanging**
 - 指示显示模式是否要发生改变
 - **WebPartDisplayModeCancelEventArgs** 获得新的显示模式并且允许控制者取消这种改变
- **WebPartManager.DisplayModeChanged**
 - 指示显示模式是否已经发生改变
 - **WebPartDisplayModeEventArgs** 得到原来的显示模式

Layout Editing

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Demo



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其它的区域类型

- **WebPartZones** 定义基本的页面显示内容
 - 在任何时间均显示
- 其它区域允许页面可以被编辑
 - 根据显示模式有条件得进行显示

名称	描述
CatalogZone	允许用户在页面上添加 Web Part
EditorZone	允许用户更改 Web Part 的属性及布局
ConnectionsZone	允许用户建立 Web Part 之间的通讯

CatalogZone 控件

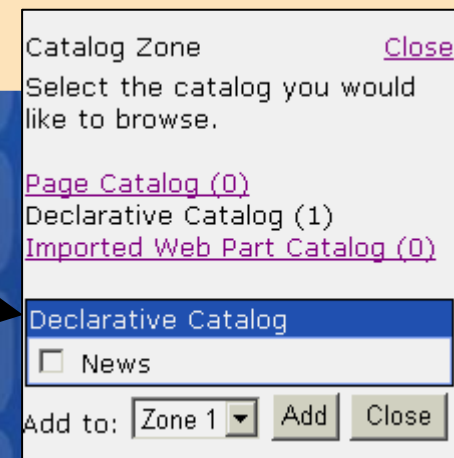
- 允许Web Part可以交互式的进行添加
- 包含一个或者多个 CatalogPart 控件

名称	描述
PageCatalogPart	显示页面上已经删除的Web Part的列表
DeclarativeCatalogPart	显示声明在 <WebPartsTemplate>中的Web Part的列表
ImportCatalogPart	允许从 .WebPart文件中导入的Web Part

声明 CatalogZone

```
<asp: CatalogZone ID="CatalogZone1" Runat="server">
  <ZoneTemplate>
    <asp: PageCatalogPart ID="PageCatalogPart1" Runat="server" />
    <asp: DeclarativeCatalogPart ID="DeclarativeCatalogPart1" Runat="server">
      <WebPartsTemplate>
        <!-- Declarative Web Parts go here -->
      </WebPartsTemplate>
    </asp: DeclarativeCatalogPart>
    <asp: ImportCatalogPart ID="ImportCatalogPart1" Runat="server" />
  </ZoneTemplate>
</asp: CatalogZone>
```

DeclarativeCatalogPart



Catalog Zones

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EditorZone控件

- 允许交互式的对 Web parts进行更改
- 包含一个或者多个 EditorPart 控件

名称	描述
AppearanceEditorPart	提供修改标题及其它界面相关属性的UI
BehaviorEditorPart	提供修改行为属性的UI
LayoutEditorPart	提供修改Web Part的显示状态，区域及区域索引的UI
PropertyGridEditorPart	提供修改定制属性的UI

声明 EditorZone

```
<asp:EditorZone ID="EditorZone1" Runat="server">  
  <ZoneTemplate>  
    <asp:AppearanceEditorPart ID="AppearanceEditorPart1" Runat="server" />  
    <asp:BehaviorEditorPart ID="BehaviorEditorPart1" Runat="server" />  
    <asp:LayoutEditorPart ID="LayoutEditorPart1" Runat="server" />  
  </ZoneTemplate>  
</asp:EditorZone>
```

Appearance

Title:

Height:

Width:

Chrome Type:

Hidden: ☐

Direction:

Behavior

Allow Close: ☒

Allow Hide: ☒

Allow Minimize: ☒

Allow Zone Change: ☒

Export Mode:

Help Mode:

Description:

Title Link:

Title Icon:

Image Link:

Catalog:

Icon Image:

Link:

Help Link:

Import Error Message:

Allow Edit: ☒

Layout

Chrome State:

Zone:

Zone Index:

PropertyGridEditorPart

- 允许修改自定义属性的UI
- 显示标记为 [WebBrowsable] 的属性

```
string _stocks; // e.g., "MSFT,INTC,AMZN"
```

```
[WebBrowsable]
public string Stocks
{
    get { return _stocks; }
    set { _stocks = value; }
}
```

允许在编辑器中显示该属性



显示的界面

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Editor Zones

Demo

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Web Part 通讯

- Web Parts可以相互通讯
 - 提供者发布接口
 - 订阅者通过接口获得数据
- WebPartManager 管理通讯
 - 从提供者获得接口
 - 向订阅者发布接口
- 通讯可以是静态的, 也可以是动态的
 - ConnectionsZone 提供后期绑定的UI

通讯提供者

- 实现方法返回接口
- 方法特性 [ConnectionProvider]

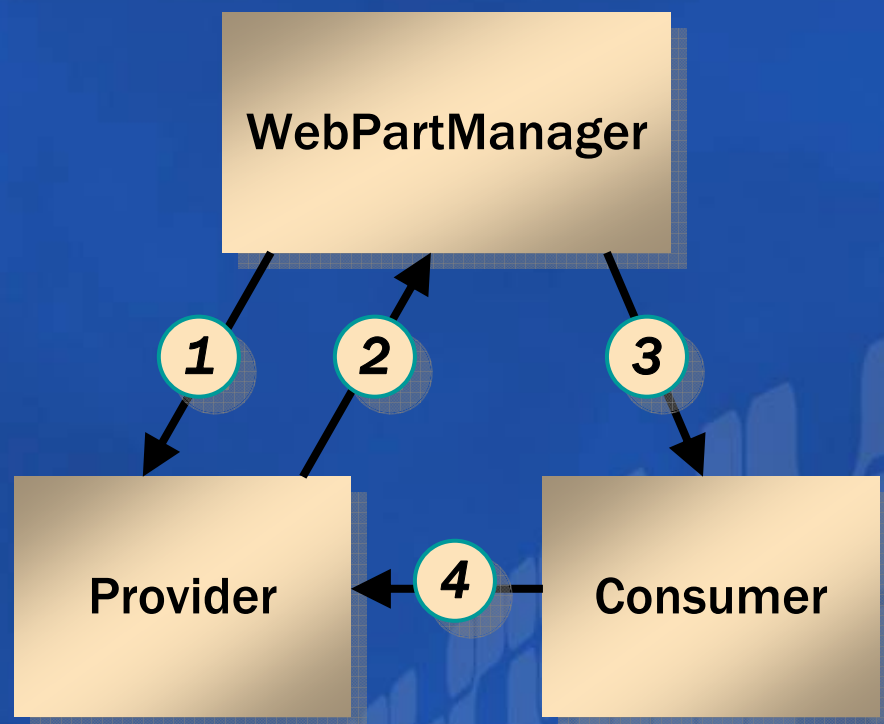
```
[Connecti onProvi der ("Zi p Code", "Zi pCodeProvi der")]  
publ ic IZi pCode GetZi pCodeI nterface ()  
{  
    return thi s; // Assumes control i mplements IZi pCode  
}  
  
// IZi pCode. GetZi pCode i mplementati on  
publ ic string GetZi pCode ()  
{  
    return _zi p;  
}
```


通讯订阅者

- 实现方法接收接口参数
- 方法特性 [ConnectionConsumer]

```
[ConnectionConsumer ("Zip Code", "ZipCodeConsumer")]  
public void GetIZipCodeInterface (IZipCode provider)  
{  
    string zip = provider.GetZipCode (); // Get zip code from provider  
    ...  
}
```

如何进行通讯



1 WebPartManager 调用
`[ConnectionProvider]` 方法

2 WebPartManager 从返回参数
中获得接口

3 WebPartManager 调用
`[ConnectionConsumer]` 方法,
将接口传递给订阅者

4 订阅者使用给定的接口
与发布者通讯

静态通讯方式

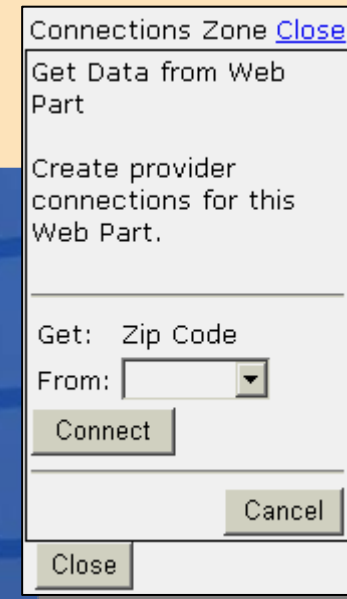
- 在 WebPartManager 的
 <StaticConnections> 元素中定义
 - 最终用户无法修改
- <asp:Connection> 的实例

```
<asp:WebPartManager ID="WebPartManager1" Runat="server">  
  <StaticConnections>  
    <asp:Connection ID="ZipCodeConnection" Runat="server"  
      ProviderID="Weather1" ProviderConnectionPointID="ZipCodeProvider"  
      ConsumerID="News1" ConsumerConnectionPointID="ZipCodeConsumer" />  
  </StaticConnections>  
</asp:WebPartManager>
```

ConnectionsZone 控件

- 提供供Web Part进行通讯的UI
- 最终用户，而不是开发人员创建通讯关系

```
<asp:ConnectionsZone ID="ConnectionsZone1"  
  Runat="server" />
```



The screenshot shows a modal dialog box titled "Connections Zone" with a "Close" link in the top right corner. The dialog contains the text "Get Data from Web Part" and "Create provider connections for this Web Part." Below this, there is a section labeled "Get: Zip Code" with a "From:" label and a dropdown menu. At the bottom of the dialog, there are three buttons: "Connect", "Cancel", and "Close".

Web Parts 个性化

- Web Parts 个性化服务
 - 自动保存相关Web Part的属性 (布局, 外观等等)
 - 自动保存标记为 PersonalizableAttribute的定制属性
- PersonalizationAdministration 类
 - 提供个性化服务的API
- Provider-based for flexible data storage

Per-User 个性化

- [Personalizable] 为每位用户保存定制属性

```
string _stocks; // e.g. , "MSFT, INTC, AMZN"
```

```
[WebBrowsable]  
[Personalizable]  
public string Stocks  
{  
    get { return _stocks; }  
    set { _stocks = value; }  
}
```

Shared Personalization

- [Personalizable (PersonalizationScope.-Shared)] persists properties on shared basis

```
string _stocks; // e.g. , "MSFT, INTC, AMZN"
```

```
[WebBrowsable]  
[Personalizable (PersonalizationScope.Shared)]  
public string Stocks  
{  
    get { return _stocks; }  
    set { _stocks = value; }  
}
```

Personalization Providers

- Web Parts 个性化服务是基于Provider模式的
- Beta2提供的两个Providers
 - AccessPersonalizationProvider (Access)*
 - SqlPersonalizationProvider (SQL Server)
- 使用自定义Providers增加对其它数据源的支持

* 在Beta2版本中将会被移除

使用 SQL Server Provider

```
<configuration>
  <system.web>
    <webParts>
      <personalization defaultProvider="AspNetSqlPersonalizationProvider" />
    </webParts>
  </system.web>
</configuration>
```

定制Web Parts

- 任何控件均可以作为Web Parts来运行, 但...
- Controls that derive from WebPart can better leverage the Web Parts infrastructure
 - 控件标题及其它与UI相关的属性
 - 控件的AllowClose, AllowZoneChange, AllowMinimize, 及其它行为属性
 - 应用基于角色的安全特性 (授权方式)
 - 增加自定义操作, 导出Web Part以及更多..

增加自定义操作

```
public class MyWebPart : WebPart
{
    public override WebPartVerbCollection Verbs
    {
        get {
            EnsureChildControls ();
            WebPartVerb verb =
                new WebPartVerb (new WebPartEventHandler (OnClearResults));
            verb.Text = "Clear Results";
            WebPartVerb[] verbs = new WebPartVerb[] { verb };
            return new WebPartVerbCollection (base.Verbs, verbs);
        }
    }

    void OnClearResults (object sender, WebPartEventArgs args) { ... }
    ...
}
```

导出Web Part

- WebPart.ExportMode属性
 - WebPartExportMode.None (默认)
 - WebPartExportMode.All
 - WebPartExportMode.NonSensitiveData
- “All” 及 “NonSensitiveData” 增加导出操作以便Web Part可以被导出
 - 仅[Personalizable] 属性
 - PersonalizableAttribute.IsSensitive识别“sensitive” 属性

导出所有属性

```
public class MyWebPart : WebPart
{
    public MyWebPart ()
    {
        ExportMode = WebPartExportMode.All;
    }
    ...
}
```

导出所选择的属性

```
public class MyWebPart : WebPart
{
    public MyWebPart ()
    {
        ExportMode = WebPartExportMode.NonSensitiveData;
    }

    // This property will be exported
    [Personalizable (PersonalizationScope.User, false)]
    public string ZipCode
    { ... }

    // This one will not
    [Personalizable (PersonalizationScope.User, true)]
    public string SocialSecurityNumber
    { ... }


    ...
}
```

IsSensitive





Question & Answer

如需提出问题，请单击“提问”按钮并在随后显示的浮动面板中输入问题内容。一旦完成问题输入后，请单击“提问”按钮。

 **问题和解答 (无问题)** ▲ ×

在此会议中尚未解答任何问题。

要向演示者提问，请在此处键入问

提问(A)

删除(D)

问题管理器(Q)

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