Using WebGrid.NET Enterprise 6.0 as WebPart in Microsoft Office SharePoint Server 2007

This white paper describes the techniques and walkthroughs to integrate Intersoft's WebGrid.NET Enterprise 6.0 with Microsoft Office SharePoint Server 2007..

Prerequisites

The following is the list of prerequisites of the required software and development environments before you can follow the walkthroughs described in this white paper.

- Windows 2003 Server with IIS installed.
- Microsoft Office SharePoint Server 2007.
- SharePoint template for Visual Studio 2005.
- Intersoft WebUI Studio.NET 2007 R2.

If you don't currently have SharePoint Server 2007 installed and wish to experiment with Intersoft WebUI Studio.NET 2007 R2, please download SharePoint Server 2007 Virtual PC Image from Microsoft Website at http://www.microsoft.com/downloads/details.aspx?FamilyID=67f93dcb-ada8-4db5-a47b-df17e14b2c74&DisplayLang=en.

Next, download the SharePoint template from the following link: http://www.intersoftpt.com/tdn/downloads/VSeWSS.zip

You can download the trial version of Intersoft WebUI Studio.NET 2007 R2 from Intersoft Website at <u>http://www.intersoftpt.com/WebUIStudio/Try</u>.

Download Samples

You can download the SharePoint WebPart sample including WebGrid.NET Enterprise 6.0 from the following link:

http://www.intersoftpt.com/tdn/downloads/SharePointSample.zip

Creating SharePoint WebPart using Visual Studio 2005

In the following walkthroughs, you will be guided to configure the newly created site in order to use WebGrid.NET Enterprise in the Website. There are several important steps that need to be done to enable Intersoft WebGrid control:

Using Sample Code

1. Open Visual Studio 2005 and create a new project.

2. Choose SharePoint >> WebPart as the template and named the project as WG6SPS.

New Project		? ×
Project types:	Templates:	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Visual C# Windows Office Smart Device Database Starter Kits Starter Kits Test Test Workflow	Visual Studio installed templates Team Site Definition List Definition Empty My Templates Search Online Templates	
Other Project Types Test Projects	erre stille Web Deut	
Name: Web Part2		1
Location: C:\Inetpub\www.roo	ot 💌	Browse
Solution: Create new Solution Solution Name:	Web Part2	
	ОК	Cancel

WebPart Template for new project.

- 3. Now, you need to add some assembly references needed in the project. Right click on **References** in **Solution Explorer** and choose **Add Reference**.
- 4. Browse and add ISNet.WebUI.WebGrid.dll from [Installation Folder]\WebGrid.NET 6.0\Bin. [Installation Folder] is using C:\Program Files\Intersoft Solutions by default.
- 5. Also, browse and add ISNet.dll and ISNet.WebUI.dll from [Installation Folder]\WebUI.NET Framework 3.0\Bin.
- Add some namespaces into the project, such as: using ISNet.WebUI.WebGrid; using System.Data.OleDb; using System.Data; using System.Web.UI.WebControls;
- 7. Next, you need to create data connection using **OleDbConnection**.
- 8. Now, you need to use **CreateChildControls()** event in order to create WebGrid control including its Script, SharedScript and server side events.

```
protected override void CreateChildControls()
{
    base.CreateChildControls();
```

```
if ( grid == null)
            _grid = new WebGrid("WebGrid1");
            grid.Width = new Unit("800px");
            grid.Height = new Unit("600px");
             grid.SharedScriptDirectory = "/CommonLibrary/Shared/";
             grid.ScriptDirectory = "/CommonLibrary/WebGrid/V6 0 7200/";
             grid.UseDefaultStyle = true;
            _grid.EnableWebResources = ISNet.WebUI.WebResourceType.Never;
             grid.InitializeDataSource += new
DataSourceEventHandler( grid InitializeDataSource);
             grid.PrepareDataBinding += new
DataSourceEventHandler( grid PrepareDataBinding);
             _grid.InitializeLayout += new
LayoutEventHandler( grid InitializeLayout);
            this.Controls.Add( grid);
          }
      {
```

9. Use InitializeLayout event to set the behavior and styles of WebGrid.

```
void _grid_InitializeLayout(object sender, LayoutEventArgs e)
{
    e.Layout.AllowSelectColumns = SelectColumns.Yes;
    e.Layout.AllowSorting = Sorting.Yes;
    e.Layout.AllowColumnFreezing = ColumnFreezing.Yes;
    e.Layout.AllowFilter = Filter.Yes;
    e.Layout.AllowExport = Export.Yes;
    e.Layout.AllowColumnMove = ColumnMove.Yes;
    e.Layout.GroupByBoxVisible = true;
    e.Layout.FreezePaneSettings.ActiveFrozenColumns = 2;
    e.Layout.FreezePaneSettings.AbsoluteScrolling = true;
}
```

10. To bind the **Products** table with WebGrid using **OleDbDataAdapter**, you need to use **InitializeDataSource** event.

```
void _grid_InitializeDataSource(object sender, DataSourceEventArgs e)
{
    OleDbDataAdapter da = new OleDbDataAdapter("Select * from Products",
    DataTable dt = new DataTable("Products");
    da.Fill(dt);
    e.DataSource = dt;
}
```

11. To retrieve the grid's data structure, you need to use PrepareDataBinding event. This event is used to get the data structure to be displayed in the grid.

```
void _grid_PrepareDataBinding(object sender, DataSourceEventArgs e)
{
    if (!Page.IsPostBack)
        _grid.RetrieveStructure();
```

- }
- 12. **OnPreRender** event is used to register WebGrid's script and share point handler before rendering the control.

```
protected override void OnPreRender(EventArgs e)
{
    base.OnPreRender(e);
    _grid.RegisterScript();
    _grid.RegisterSharePointHandler();
}
```

13. Finally, we use **Render** event to render the WebGrid into WebPart.

```
protected override void Render(HtmlTextWriter writer)
{
    _grid.RenderControl(writer);
}
```

14. Build the project afterwards.

Setting the GAC

1. Go to your [Project path]\bin\Debug\ and locate your [Project's name].dll. For example: if you are rebuilding WG6SPS project, after rebuilding, you will see the WG6SPS.dll.

🗁 C:\Inetpub\wwwroot\WG65P	S\WG6SPS\bin\[)ebug							
<u>File E</u> dit <u>V</u> iew F <u>a</u> vorites <u>T</u> o	ools <u>H</u> elp			2					
🔇 Back 👻 🕥 🖌 🏂 🔎 Search	h 🜔 Folders 🛛 🜔	🕸 🔀 💙 🛛 🖽							
Address 🛅 C:\Inetpub\www.root\WG65P5\WG65P5\bin\Debug									
Name 🔺	Size	Туре	Date Modified	Attributes					
🔊 Microsoft.SharePoint.Search.dll	1,295 KB	Application Extension	6/6/2007 6:35 PM	А					
Microsoft.SharePoint.Search	3 KB	XML Document	9/11/2006 10:17 AM	А					
Service Servic	20 KB	Application Extension	12/21/2007 4:27 PM	Α					
🐏 WG6SPS.pdb	14 KB	Program Debug Dat	12/21/2007 4:27 PM	А					

The new dll for SharePoint's assembly.

2. Drag the dll (WebGridSPSDemo.dll) to your GAC. Right click on the dll and choose **Properties**. Copy the **Public Key token**.

🛅 C:\WINDOWS\assemb	ly					_ 🗆 >
<u>File E</u> dit <u>V</u> iew F <u>a</u> vor	ites <u>T</u> ools	; <u>H</u> elp				ar
😋 Back 👻 🕤 🗸 🎓	Search	🕞 Folders 🛛 🔃 📝	×			
	lassembly					▼ → Go
Assembly Name	Version	Cul Public Key Toke	<u>م</u>	Proces		
: viswfr	1.0.50	WG6SPS Propertie	s	110000111	? X	1
and viswfc	2.0.0.0					
3	1.0.50	General Version				
:	2.0.0.0					
: diswfccw	1.0.50	- 2 -				
: diswfccw	2.0.0.0	S CONTRACTOR				
: 🛃 vjswfchtml	1.0.50					
: 💼 vjswfchtml	2.0.0.0		Warana			
: 💰 VSLangProj	7.0.33	Name:	WG65P5			
: 💰 VSLangProj2	7.0.50	Processor Architectur	e: MSIL			
ः 🏟 VSLangProj80	8.0.0.0					
: 💰 VSTOPersist. Interop	8.0.0.0	Last Modified:	12/21/2007 -	4:16:54 PM		
:dVSTOStorageWrapper	8.0.0.0	Culture	Neutral			
ः 🏟 VsWebSite. Interop	8.0.0.0	Calcaro,	Nederal			
ः 🏟 WebDev. WebHost	8.0.0.0	Version:	1.0.0.0			
:💰 WebPart2	1.0.0.0	Duble Key Tabaay	0644-00446			
ः 🛃 WebPart3	1.0.0.0	Public Key Token:	9F4daUU1160	:38ec5		
: 🛃 WebPart7	1.0.0.0	CodeBase:	1			
: 🕵 WebPartCombo	1.0.0.0					
:	1.0.0.0					
: 🛃 WebPart WebCombo	1.0.0.0					
: 🛃 WebPart WebInput	1.0.0.0					
s∰WG6SPS	1.0.0.0	Г		Canad		
ः 🛃 WG6WebPart	1.0.0.0		OK	Cancer	неір	
ः 💐 WGSPS	1.0.0.0	9140300116030	реса	MOIL		-
: 🛃 WindowsBase	3.0.0.0	31bf3856ad364	4e35	MSIL		
: WindowsFormsIntegr	3.0.0.0	31bf3856ad364	4e35	MSIL		
: 🛃 WPFinal	1.0.0.0	9f4da00116c38	Bec5	MSIL		

Display Public Key Token for SharePoint's assembly.

Mark WebGrid as Safe Control

- 1. Go to your [SPS 2007 Project path]\VirtualDirectories\80\ and open web.config.
- 2. Paste the following code under **<SafeControl>**:

<SafeControl Assembly="[Project Name], Version=1.0.0.0, Culture=neutral, PublicKeyToken=[Your Public Key Token]" Namespace="[Project Name]" TypeName="*" Safe="True" />

For Example:

<SafeControl Assembly="ISNet.WebUI.WebGrid, Version=1.0.0.0, Culture=neutral, PublicKeyToken=3e60b85fb8502d5e" Namespace="ISNet.WebUI.WebGrid" TypeName="*" Safe="True" />

Run WebGrid in Microsoft Office SharePoint Server 2007 as WebPart

1. Open a browser such as Internet Explorer. Go to http://localhost/. When the page is loaded, choose Site Actions >> Site Settings >> Modify All Site Settings.



SharePoint's site

- 2. Choose Web Parts under the Galleries section.
 - 3. Click **New** and tick the WebPart you want to load and click **Populate Gallery** afterwards.

🚰 Web Part Gallery - Micro	soft Internet Explorer				_ 🗆 ×
<u>File Edit View Favorite</u>	s <u>T</u> ools <u>H</u> elp				
😋 Back 🝷 🕘 👻 😰	🏠 🔎 Search 🛭 👷 Favorites 🛛 🥹 🗧	à 🐗 🛛			
Address i Attp://istester200)3/_catalogs/wp/Forms/AllItems.aspx			💌 🔁 Go	Links »
Home			Welcome ISTES	TER2003\Administrat	or 👻 N📥
🎁 Home	Alls	ites	•		
Home /WebApplication1	Document Center News - Reports S	earch S	iites WebGrid.NET 5.	0	
	Home > Web Part Gallery				
	Web Part Gallery				
View All Site Content	Use this Web Part Gallery to store and retrieve V	Veb Parts.	The Web Parts in this g	allery are available to	o this site
/WebApplication1	preview a web Part, click its title.				
Document Center	New Upload Actions Settin	gs 🕈		0	View
Sample News Orticle	Type New Ic Ic	Edit	Modified	Modified By	Group
News Archive	AdvancedSearchBox.dwp		7/12/2007 2:34 PM	\Administrator	Search
Reports	AuthoredListFilter.webpart		7/12/2007 2:35 PM	ISTESTER2003	Filters
Search				p identification deter	
Sites	BusinessDataActionsWebPart.dwp		7/12/2007 2:35 PM	ISTESTER2003	Busines:
WebGrid.NET 5.0				\Administrator	Data
Recycle Bin					
	BusinessDataAssociationWebPart.webpa	irt 📝	7/12/2007 2:35 PM	ISTESTER2003 \Administrator	Busines: Data
	BusinessDataDetailsWebPart.webpart		7/12/2007 2:35 PM	ISTESTER2003	Busines:
				\Administrator	Data
4					
http://istester2003/_layout	s/NewDwp.aspx			 Internet	

Choose New to create a new WebPart.

🦉 Ne	w We) Parts - Microsoft Internet Explorer	
Eile	<u>E</u> dit	<u>View Favorites Tools Help</u>	A
🕝 В.	ack 👻	🕥 👻 🖹 🏠 🔎 Search 📌 Favorites 🧔 😥 🍇 🥸	
A <u>d</u> dre	ess 🦉	http://istester2003/_layouts/NewDwp.aspx	Go Links »
		Microsoft.SharePoint.WebPartPages.PageViewerWebPart	PageViewe
		Microsoft.SharePoint.WebPartPages.SimpleFormWebPart	SimpleForn
		Microsoft.SharePoint.WebPartPages.TitleBarWebPart	TitleBarWe
		Microsoft.SharePoint.WebPartPages.UserDocsWebPart	UserDocsV
		Microsoft.SharePoint.WebPartPages.UserTasksWebPart	UserTasks\
		Microsoft.SharePoint.WebPartPages.XmlWebPart	XmlWebPa
		WebPartCombo.WebPartCombo	WebPartCc
	◄	WG6SPS.WG6SPS	WG6SPS
		WGSPS.WGSPS	WGSPS
🙆 Do	one		

Select the related SharePoint's project.

4. You are set now. Scroll to your WebPart and click on it. You will be able to view the WebPart you have created.

Home > Web Part Gallery > Web Part Preview

Web Part Gallery: Web Part Preview

This is a preview of the Web Part. To use this Web Part, open a Web Part Page and then add this Web Part from the ToolPane.

WG6SPS

Drag a column h	eader here to group	o by that column.					
ProductID	ProductName	SupplierID	CategoryID	QuantityPerUnit	UnitPrice	UnitsInStock	UnitsOnOrd
	r \Upsilon	7	7	Y	7	7	
1	Chai	1	1	10 boxes x 20	. 18	39	0
2	Chang	1	1	24 - 12 oz bott	19	17	40
3	Aniseed Syrup	1	2	12 - 550 ml bo	10	13	70
4	Chef Anton's	2	2	48 - 6 oz jars	22	53	0
5	Chef Anton's	2	2	36 boxes	21.35	0	0
6	Grandma's Bo	3	2	12 - 8 oz jars	25	120	0
7	Uncle Bob's Or	. 3	7	12 - 1 lb pkgs.	30	15	0
8	Northwoods Cr	. 3	2	12 - 12 oz jars	40	6	0
9	Mishi Kobe Niku	4	6	18 - 500 g pkgs.	97	29	0
10	Ikura	4	8	12 - 200 ml jars	31	31	0
11	Queso Cabrales	5	4	1 kg pkg.	21	22	30
12	Queso Manche	5	4	10 - 500 g pkgs.	38	86	0
13	Konbu	6	8	2 kg box	6	24	0
14	Tofu	6	7	40 - 100 g pkgs.	23.25	35	0
15	Genen Shouyu	6	2	24 - 250 ml bo	15.5	39	0
16	Pavlova	7	3	32 - 500 g boxes	17.45	29	0
17	Alice Mutton	7	6	20 - 1 kg tins	39	0	0
18	Carnarvon Tig	7	8	16 kg pkg.	62.5	42	0
19	Teatime Choc	8	3	10 boxes x 12	. 9.2	25	0
20	Sir Rodney's M	. 8	3	30 gift boxes	81	40	0
21	Sir Rodney's S	. 8	3	24 pkgs. x 4 pi	. 10	3	40
22	Gustaf's Knäck	. 9	5	24 - 500 g pkgs.	21	104	0
23	Tunnbröd	9	5	12 - 250 g pkgs.	9	61	0
24	Guaraná Fantá	. 10	1	12 - 355 ml cans	4.5	20	η .

The final result of WebGrid as WebPart.

Conclusion

With the latest innovations in deep integration and interoperability among Microsoft development platforms, Intersoft WebGrid.NET Enterprise[®] 6.0 is the ultimate data display and management solution for professional developers targeting Microsoft Visual Studio[®] 2005 and Office SharePoint Server[®] 2007.

WebGrid.NET Enterprise[®] 6.0 includes over 750 features in total – from data display, editing, Gridrelated features to advanced user runtime features such as Excel 2007[®] style column freezing. It has now support over 3500 unique scenarios to meet advanced business logic and enterprise-specific requirements. To learn more about WebGrid.NET Enterprise, please visit <u>http://www.intersoftpt.com/WebGrid</u>. To download the evaluation version, please visit <u>http://www.intersoftpt.com/WebGrid/Try</u>. To download SharePoint WebPart, please visit <u>http://www.intersoftpt.com/tdn/downloads/SharePointSample.zip</u>.