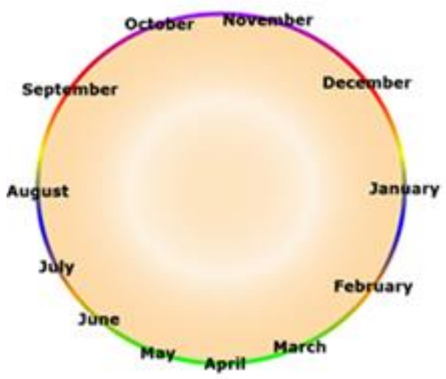
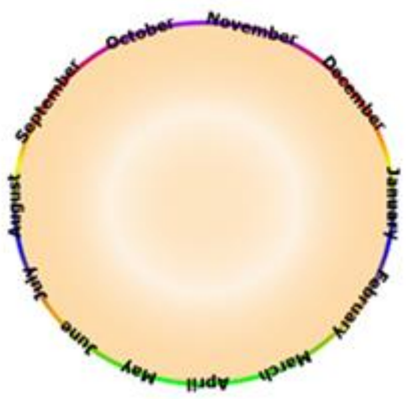
Introduction

Have you ever heard of **PathListBox** introduced in **Silverlight** 4 as Expression Blend 4 namespace? Yes, it is a new control added in the "**http://schemas.microsoft.com/expression /2010/controls**" namespace. You can use this to position your data, text, images or other controls in the way of a single or multiple path controls. You can use your jig-jag path to set your contents or you can use circular or rectangular path to organize your content.





In this article, I will guide you to understand the functionality of this control. Also, I will guide you step-by-step to create your first **PathListBox** control demo application. Here we will create the above two samples where the collection of texts will position them in proper location on the edge of the circular path.

Readout the complete post to learn about it and at the end, if you have any queries or comments, please let me know. I will try to answer your queries as soon as possible.

What is PathListBox control

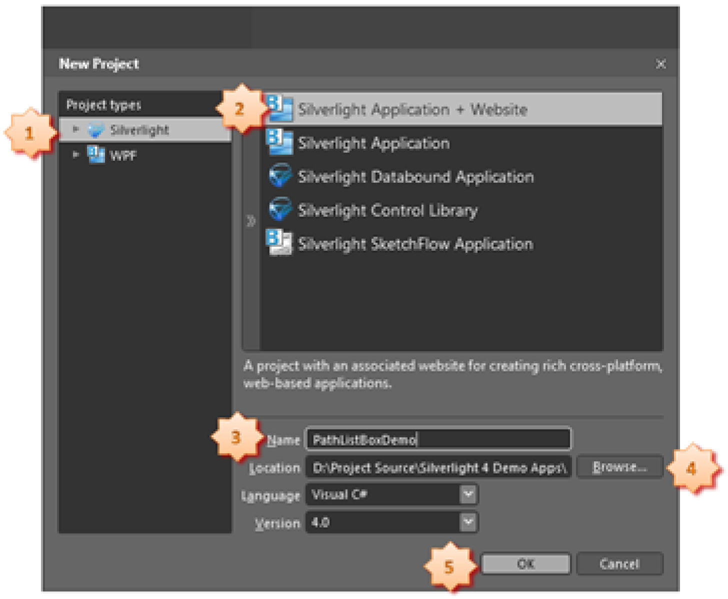
The **PathListBox** is a new control included in the Expression Blend 4 SDK that builds on the original functionality of the ListBox, displaying multiple items and item selection, and new functionality enabling path-based layout. The **PathListBox** provides many areas of customization through properties and a custom child container control, the **PathListBox**Item.

You can read more about this control from Microsoft site. Click the below link to read more about it:

- **An Introduction to the PathListBox**

Creating your Silverlight Project

Before starting with the discussion, we need to create the **Silverlight** project first. Be sure that, you are using **Silverlight** 4. You need to install Visual Studio 2010 and/or Expression Blend 4 for the development. Here I will use only Expression Blend and hence, if you have that one installed in your development machine then we are good to go.


New Project
Project types
Silverlight
WPF
Silverlight Application + Website
Silverlight Application
Silverlight Databound Application
Silverlight Control Library
Silverlight SketchFlow Application
Browse...
OK
Cancel
1
2
3
4
5

A project with an associated website for creating rich cross-platform, web-based applications.

Name: PathListBoxDemo
Location: D:\Project Source\Silverlight 4 Demo Apps\
Language: Visual C#
Version: 4.0

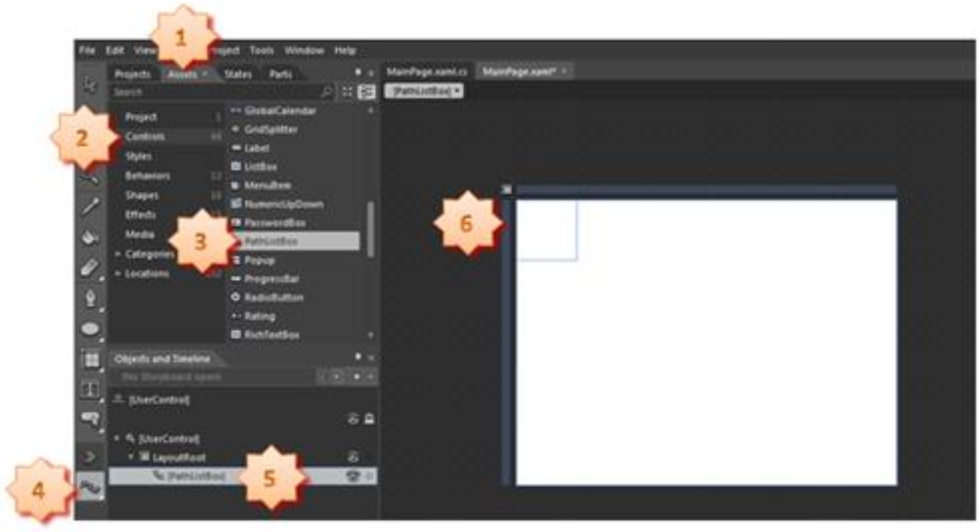
Let us start with the development project. Open Expression Blend 4 and Create a new Project from the File menu:

1. Select "**Silverlight** from the left pane
2. Now select "**Silverlight** Application + Website" from the right pane (as shown in the above screenshot). We need to host the **Silverlight** application in a webpage and hence we are creating a Website project.
3. Give a proper name to your project. I used "**PathListBox**Demo" as the name of my solution.

4. Click "Browse" to set the location of the solution
5. Hit "OK" to continue. This will create your **Silverlight** project from the default template.

Creating the first PathListBox control

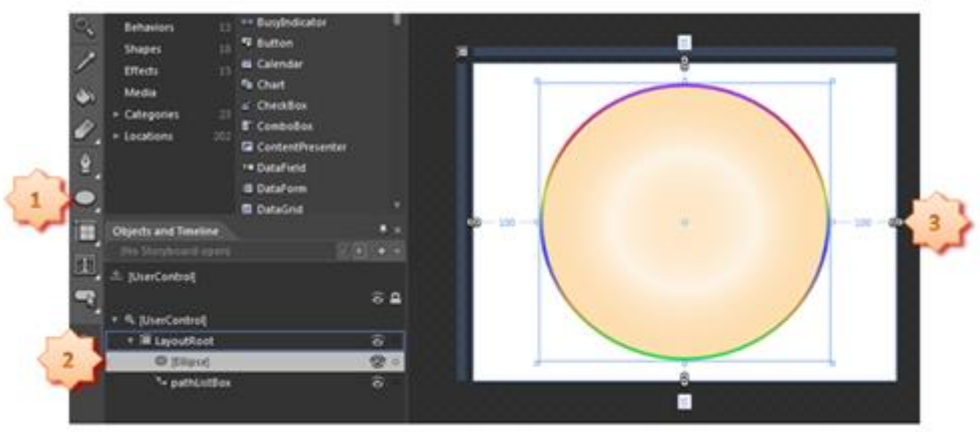
Once your project has been created with the default page named "MainPage.xaml", open the file to design it with the **PathListBox** control. Follow the below steps mentioned in the screenshot:



1. Click on the "Assets" tab to open up the controls gallery.
2. Click "Controls" from the left panel and this will populate all the controls available for your **Silverlight** application.
3. From the right panel, search for "**PathListBox**". Click it to select.
4. The selected **PathListBox** control will add in your recent selected pane.
5. Double click on the recent selected pane (shown in the step 4) and the control will add in your LayoutRoot Grid panel.
6. You can see the **PathListBox** added to your page, name it as "**pathListBox**". Don't worry about the dimension. You can set it to zero also as we don't need it. For now, leave it unchanged.

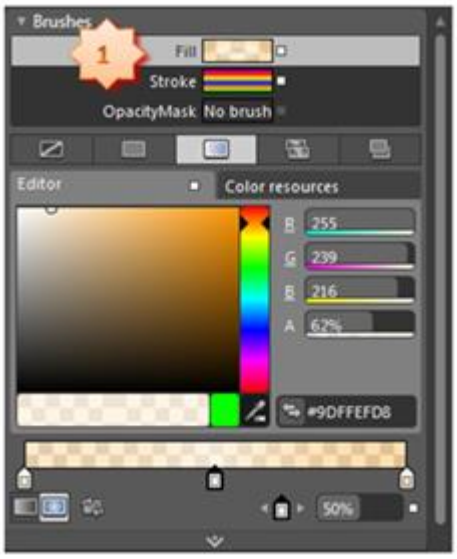
Create a Circular path

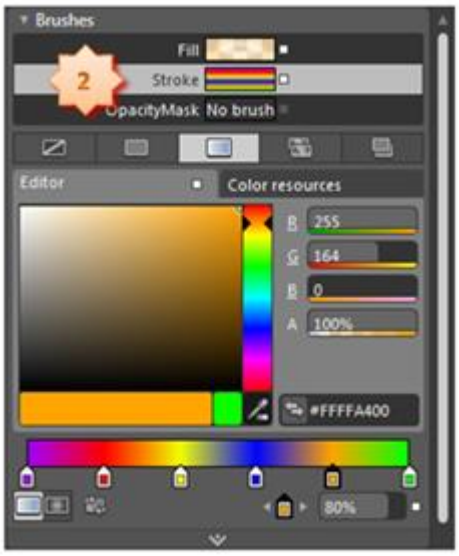
Once our **PathListBox** control has been added to the page, it’s time to add a circular path control for our application. To create a circular path in the XAML page, use the following steps in your Expression Blend IDE:



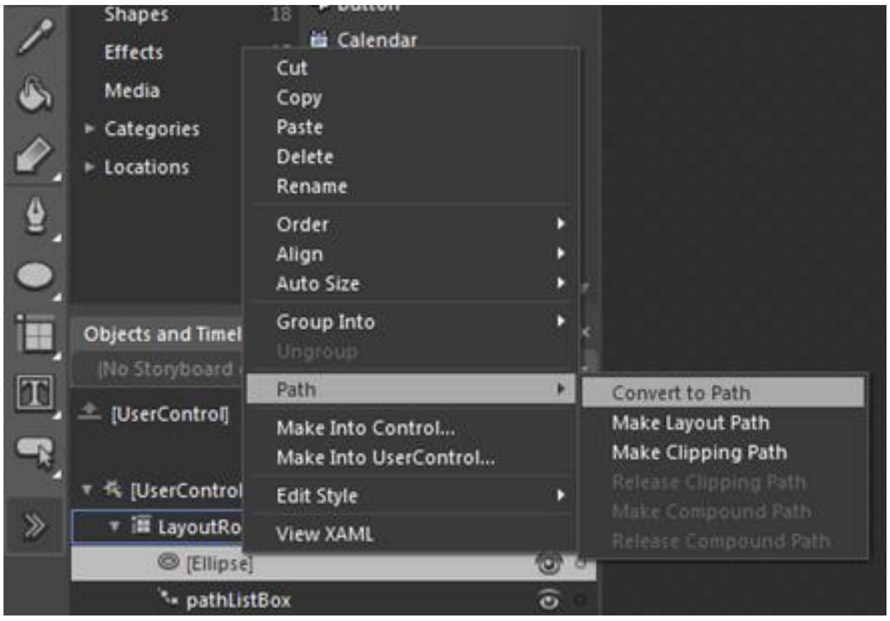
1. As described in the above screenshot, select the “Ellipse” control from the Toolbox of your Expression Blend.
2. Add it inside your grid control named “LayoutRoot”. Be sure that, it has been added behind the **PathListBox**.
3. Resize your “Ellipse” control to make it a proper circle.

Now, do some styling for your circular path. I used a Gradient Fill color and a Gradient Stroke color. Steps are mentioned in the following snapshot:





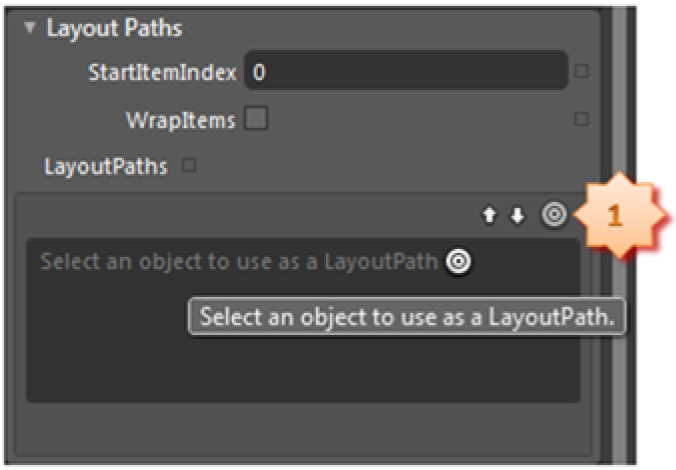
Once your styling is over, we can convert the "Ellipse" control to a Path control. As the **PathListBox** control needs a Path to position the contents hence convert the same to a Path control. Right click over your "Ellipse" control in the Layer explorer (as mentioned in the below snapshot) and from the right click context menu select "Path" and then click on "Convert to Path". This will change the ellipse to a path control.



Binding the Path to PathListBox

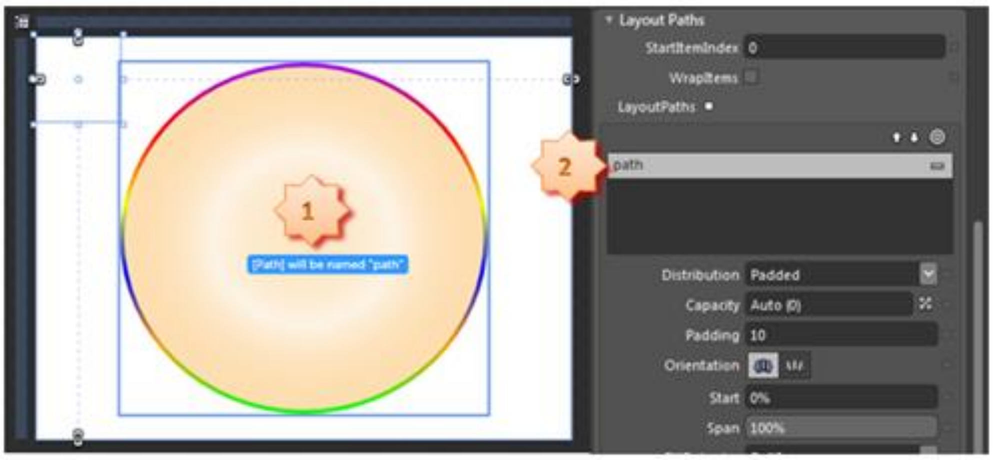
It's time to bind the recently added Path to the **PathListBox**. You can bind multiple paths as the LayoutPaths to your **PathListBox**. From the

Layer panel select your **PathListBox** control named "**pathListBox**" and open the properties panel for the selected control. Expand the property group named "Layout Paths". There is a circular item as mentioned in the following picture. Click on it and drag to the circular path shown in the next snapshot.



Layout Paths
StartItemIndex
0
WrapItems
LayoutPaths
1
Select an object to use as a LayoutPath
Select an object to use as a LayoutPath.

1. Once dragged it to our circular path it will show you a message "[Path] will be renamed 'path'". Yes, as our path control doesn't have any name, hence Blend will give a default name to it.
2. On drop it will add the path control named "path" (which has been renamed just now) in the LayoutPaths section. You can add as many path you want in this step or also can remove any existing paths.



If you open your XAML page, you will see the following xaml code snippet in your page:

```
<ec:PathListBox x:Name="pathListBox" HorizontalAlignment="Left" Height="100"
                VerticalAlignment="Top" Width="100" FontSize="18.667"
                FontWeight="Bold">
    <ec:PathListBox.LayoutPaths>
        <ec:LayoutPath SourceElement="{Binding ElementName=path}" Padding="35"/>
    </ec:PathListBox.LayoutPaths>
</ec:PathListBox>
```

Let me explain you the XAML code. Here you will see the **PathListBox** control which has a single LayoutPath inside the LayoutPaths collection. You can add as many LayoutPath here. The LayoutPath has been binded to the Element named "path" i.e. our Circular path.

You can use Padding here to set the delta value between each item. I will discuss this later when we bind our content and show you the demonstration of the code.

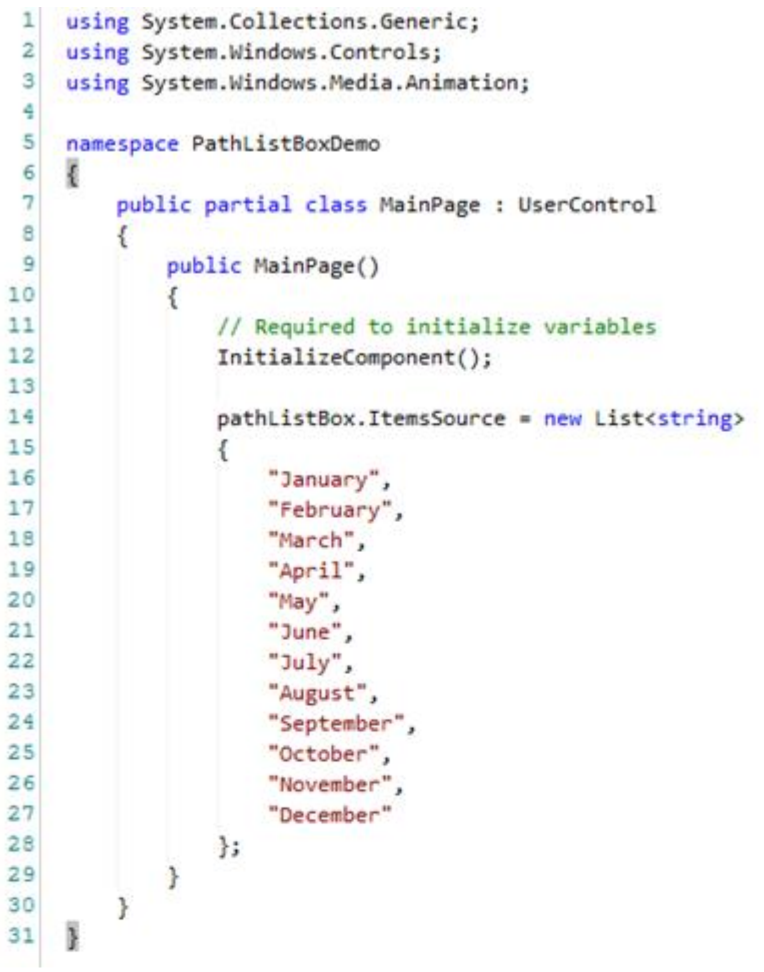
Here you can ask me one question: "What is ec namespace mentioned for **PathListBox**?" **PathListBox** control is not part of the default library. It is available in the Expression controls namespace. Look into the following code to see the full namespace:

```
<UserControl
    xmlns="http://schemas.microsoft.com/winfx/2006/xaml/presentation"
    xmlns:x="http://schemas.microsoft.com/winfx/2006/xaml"
    xmlns:ec="http://schemas.microsoft.com/expression/2010/controls"
    x:Class="PathListBoxDemo.MainPage"
    Width="640" Height="480">
```

Working with the Code

So, as of now our UI design is done. Now, it's time to create some data record in Code behind and bind it accordingly to the ItemSource of the **PathListBox** control. Open your MainPage.xaml.cs file and inside that create a List collection of string. I am using 12 months of the year here. Now set the created list collection to the ItemSource of the **pathListBox**.

See the code snippet here:

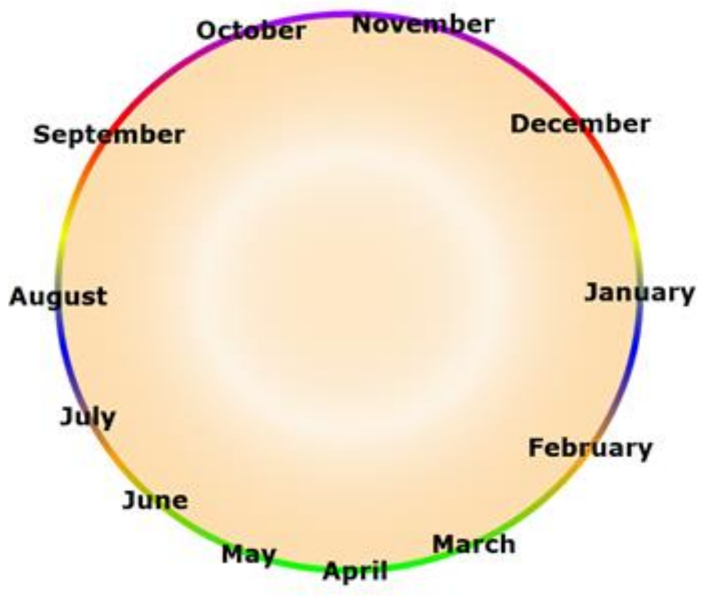


```
using System.Collections.Generic;
using System.Windows.Controls;
using System.Windows.Media.Animation;

namespace PathListBoxDemo
{
    public partial class MainPage : UserControl
    {
        public MainPage()
        {
            // Required to initialize variables
            InitializeComponent();

            pathListBox.ItemsSource = new List<string>
            {
                "January",
                "February",
                "March",
                "April",
                "May",
                "June",
                "July",
                "August",
                "September",
                "October",
                "November",
                "December"
            };
        }
    }
}
```

Application Demo

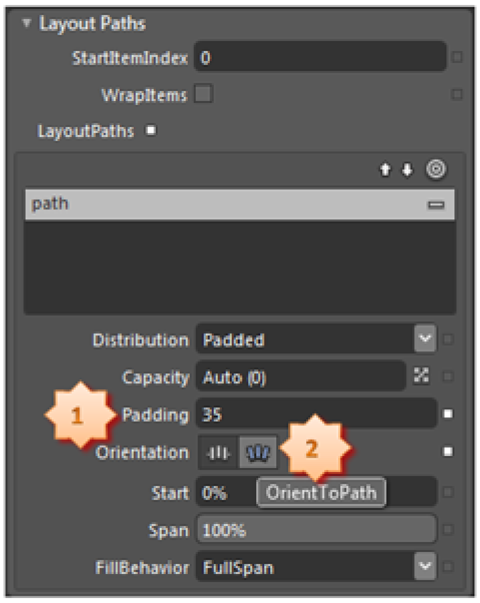
It's time to demo our application. Build the project and run it by hitting "F5" in your IDE (either Visual Studio 2010 or Expression Blend 4). You will see that the **Silverlight** application has been loaded inside your browser window. You will notice that, the collection of months are loaded inside the **Silverlight** app in the same direction of the circular path. It has same delta amount of gap between each item. This is nothing but your padding value. If you increase the padding value, you will see that the items will have a more gap than the earlier and in the reverse case, the items will be place near to each other.

Look into the following screenshot:

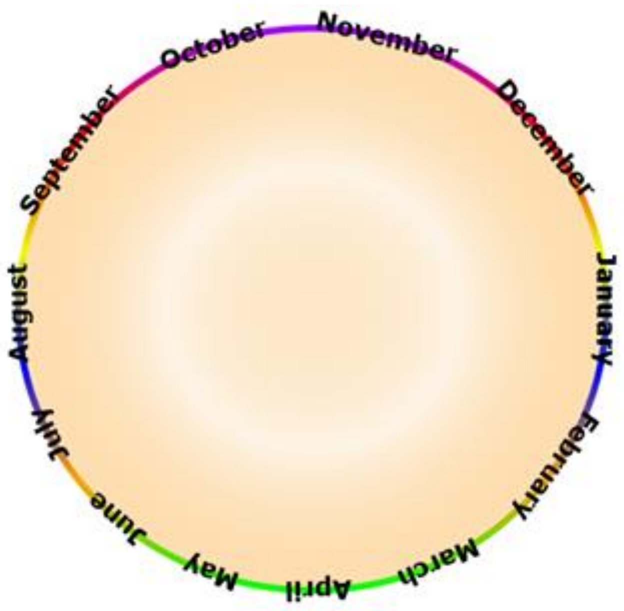


As of now, our first example is ready. Now you may come into a situation where each character of the words will place in the same direction as the circular path. So, my question to you is: Can we do that? Yes, we can. We can change the orientation of the **PathListBox**. The default value of the orientation is none. We have one more orientation which is called as "OrientToPath". Once set, it will relocate the items at the edge of the path.

Hence, open your Expression Blend once again and go to the Properties pane of the **PathListBox** control. In the LayoutPaths tab you can see a property named "Orientation" available (see the below screenshot). Click the second orientation which is called as "OrientToPath".


Layout Paths
StartItemIndex 0
WrapItems
LayoutPaths
path
Distribution Padded
Capacity Auto (0)
Padding 35
Orientation OrientToPath
Start 0%
Span 100%
FillBehavior FullSpan

Now run your application once again and you will notice the months orientation changed to the way of your circular path. Have a look into the following screenshot:



End Note

So, what is the benefit of this **PathListBox** control? I think, the answer is clear to you. Let me explain the benefit from my side. You can animate any control or text in a circular way or you can animate in any random way that you want. You can rotate some ads for your business application for your client using the control. You can easily create your loader control using this. You don’t have to write more logic for your rounded loader like the one when your **Silverlight** application loads (during XAP download). Even you can do many more thing that you want as per your requirement.

This article is a basic one to showcase you the **PathListBox** control and mainly targeted for the beginners who are new to **Silverlight** or new to **Silverlight** 4. This article is also helpful to those who didn’t know about this control or didn’t explored the power of this control. Have a try in your site and if you have any queries, please let me know. I will try to answer you as soon as possible. Don’t forget to leave your comments here. By this way, I can improve my future articles and provide you more tutorials on **Silverlight**.