Windows Phone

Building a Silverlight Application

7

Akber

Window Phone 7 Development

EP.NET Professionals User Group

http://www.epdotnet.com

Agenda

Silverlight on Windows Phone
Creating our first application
Responding to control events
Windows phone themes and styles
Customizing text input
An introduction to databinding in Silverlight
Q&A

Windows Phone

Silverlight on Windows Phone

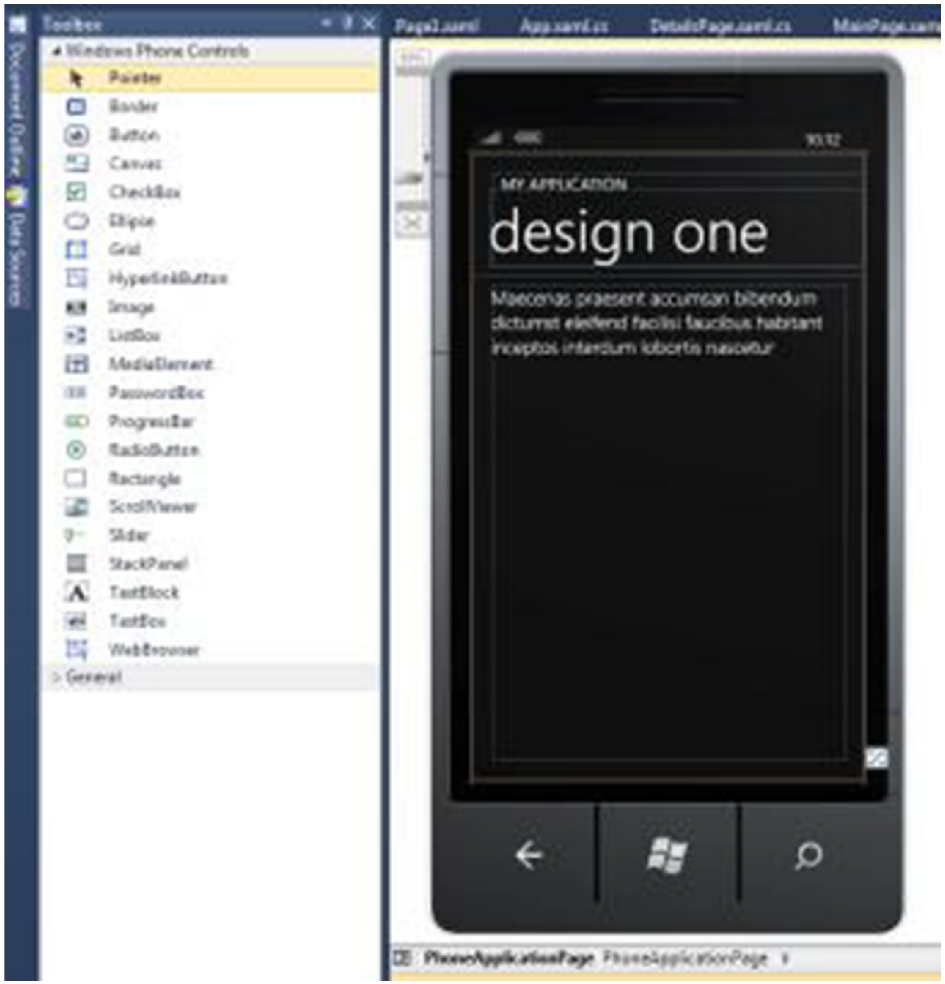
Silverlight on Windows Phone 7

- Base on Silverlight 3 and above
  - Some phone-specific additions
- Silverlight runtime optimized to display content on memory-constrained devices
  - Applications hosted on the client device
  - Does not support applications hosted in the browser
- C# only support – New VB.NET is now supported with Community Technology Preview

Silverlight Project Types

- Visual studio offers three project templates
  - Windows Phone Application – a basic, single page application
  - Windows Phone List Application – a working app consisting of a list of data items which goes to Details page when an item is selected
  - Windows Phone Class Library – a library for shared logic with no pre-built UI
- The starter projects already adopt the look and feel of the Windows Phone platform

Silverlight Controls



- Silverlight control set is rich
- Familiar to existing Silverlight developer
- Some additional features
  - For example, Software Input Panel (SIP) support on Textbox

Show Me Some Code!

THE FUN STUFF

XAML

X eXtensible **A** Application **M** Markup **L** Language

XML

Declarative Markup

```
<Grid>
    <TextBlock FontSize="48" Text="Hello world" />
</Grid>
```

Code

- XAML maps to code
- Anything in XAML can be done in code

The Basics

DEMO - XAML + CODE

Shapes

- Vector-Based
- Importable from Photoshop or Illustrator

Brushes

- Determines how objects are painted and outlined
- Solid, Gradient, Image, Media

Pretty Shapes

DEMO – SHAPES + BRUSHES

Make it Do Something

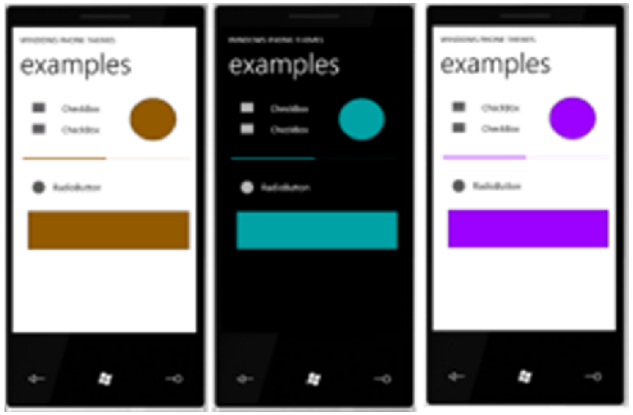
DEMO – CONTROLS + EVENTS

Windows Phone Themes

- Windows Phone 7 allows users to customize the system them on their phone
  - Select between Light

  Or Dark background
  - Select from a choice of

  10 accent colors



- Silverlight controls are all theme aware
  - Adopt color scheme

  Selected by the user default
  - Developer can customize control rendering and override any themed properties

Styling

- Apply consistent formatting
- Per-page or per-application

```
<Style TargetType="TextBlock"
       x:Key="SubHeadingText">
    <Setter Property="FontSize"
            Value="42" />
    <Setter Property="Foreground"
            Value="Blue" />
</Style>
```

Make it Consistent

DEMO – STYLING

Windows Phone Styles

```
<TextBlock x:Name="PageTitle" Text="Damage Calc" Margin="-3,-8,0,0"
Style="{StaticResource PhoneTextTitle1Style}"/>
```

- Silverlight for Windows Phone has a built-in resource dictionary containing standard styles
  - Best practices is to use these styles for sizing text, setting colors of brushes – unless you want to develop a custom style
- To see which styles are available, look at *{Program Files}\Microsoft SDKs\Windows Phone\v7.0\Design\ThemeResources.xaml*

Control Templates

- There is also a dictionary of XAML templates for the standard controls
- You can use this as a basis of any new types of custom control you might want to make
- You can also find out how controls are put together
- You can find them at *{Program Files}\Microsoft SDKs\Windows Phone\v7.0\Design\System.Windows.xaml*

Layout

- Flexible Layout system
- Canvas | Fixed-position
- StackPanel | “Stacks” dynamically
- Grid | Rows & columns, very flexible

Where Does It Go?

DEMO – LAYOUT

TextBox InputScope

```
1.    <TextBox Height="84" HorizontalAlignment="Left" Margin="206,132,0,0"
      Name="damageTextBox" Text="0" VerticalAlignment="Top" Width="248" FontSize="32"
      TextChanged="damageTextBox_TextChanged">
2.        <TextBox.InputScope>
3.            <InputScope>
4.                <InputScopeName NameValue="Digits" />
5.            </InputScope>
6.        </TextBox.InputScope>
7.    </TextBox>
```

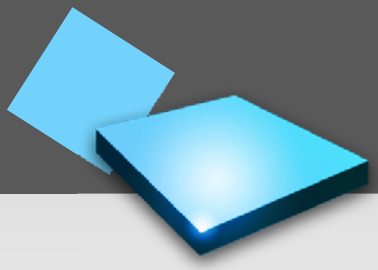
- InputScope gives a hint to the system which Soft Input Panel layout to use
- User will appreciate this.

Where Does It Go?

DEMO – INPUT SCOPE

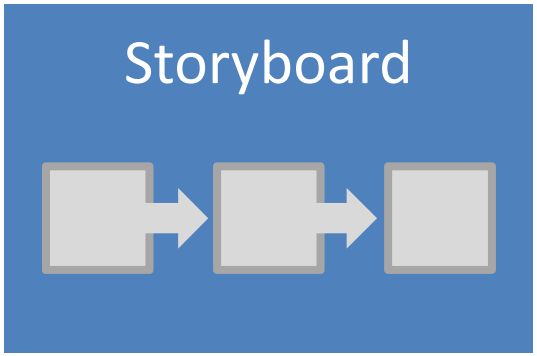
Transforms

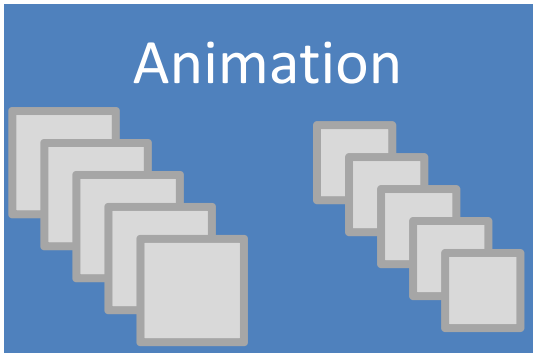
Alters any element	Transforms	Projections
Controls Text Media	Rotate Scale Skew Translate Matrix	Plane Matrix Apply 3D to a 2D element

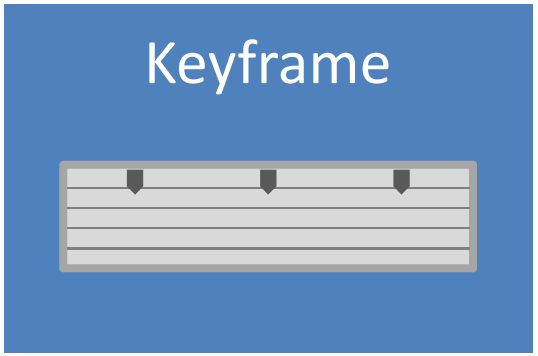


Animations

- Animate a property value over time
- Basics







- Expression Blend is the best tool for designing animations

Make it Look Great

DEMO –TRANSFORMS, ANIMATIONS

Databinding

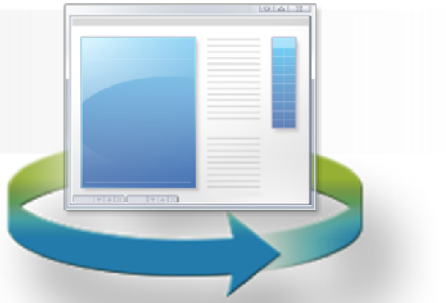
- Powerful Concept
- Two types
  - Property binding
  - List binding
- Based on change notification

Make it Real

DEMO – DATABINDING

Code Reuse

Reuse UI



- User Control
- Custom Control

Reuse Code

- Across projects
- Across platforms (Web, Windows Phone)

Don’t Reinvent The Wheel

DEMO – CODE REUSE

Q&A

Windows Phone is based on Silverlight 3.0

You have to create your XAML text using the Notepad editor

Silverlight component cannot generate events

You can customize the keyboard displayed for text input

Silverlight components automatically adapt to the display settings

You can read only information from components using data binding