



Esri International User Conference | San Diego, CA
Technical Workshops | July 13, 2011

Windows Phone – Developing Applications

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Agenda

- Intro
- Getting started
- Patterns & Practices
- Deploying apps
- Wrap-up



Intro



The ArcGIS System



ArcGIS API for Windows Phone

- **Powerful Windows Phone Mapping API**
- **Designed for the Windows Phone**
 - Same Object Model as the ArcGIS API for Microsoft Silverlight/WPF
- **Use ArcGIS Server/Online, Bing Maps services**
- **Full Touch/Gesture support**
- **Integrates with Microsoft development environments**



Requirements

- **Windows Phone Developer Tools**

- **Microsoft Visual Studio 2010**
- **Expression Blend 4**
- **Deployment Utility**
- **Emulator**
- **From [App Hub](#)**



- **Windows Phone**

- **Vista and Windows 7 operating systems**

Libraries



- **ESRI.ArcGIS.Client.dll**
 - Map, ArcGIS Service Layers, Graphics, Geometry, Symbols
- **ESRI.ArcGIS.Client.Bing.dll**
 - Adds support for using Bing layers and services
- **ESRI.ArcGIS.Client.WebMap.dll**
 - Read & process WebMap 1.2
- **ESRI.ArcGIS.Client.Toolkit.dll***
 - Common set of controls for map interaction
- **ESRI.ArcGIS.Client.Toolkit.DataSources.dll***
 - Common set of data sources

*CodePlex URL: <http://esrisilverlight.codeplex.com>

Capabilities

- **Visualization with Map control**
- **Editing**
- **Tasks**
 - **Query, Find, Identify, Address Locator, Geometry, Geoprocessing, Route**
- **Consume geospatial services**
 - **ArcGIS.com**
 - **ArcGIS Server**
 - **Bing Maps**



Resource Center

- [ArcGIS App Info](#)
- [Concepts](#)
- [Samples](#)
- [API Reference](#)
- [Code Gallery](#)
- [App Showcase](#)

Getting Started



Getting Started

Resource Center



Download



Build App

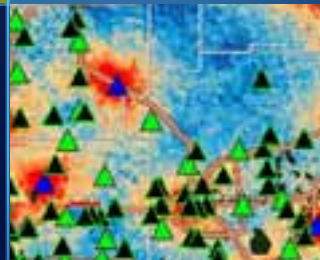
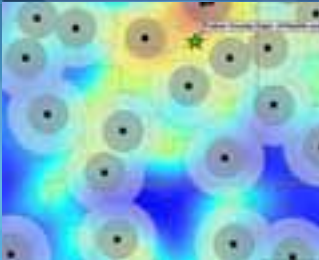


ArcGIS API – Windows Phone

DeKalb County Board

Fulton County Dept. of Health and Wellness/District 3, Unit 2, 06/14/2014

Your First App



Patterns and Practices



Patterns & Practices

- **Metro design**
- **Effective use of data**
- **Map Tips**
- **Legend**
- **Editing**
- **Using the Phone's GPS**

Metro Design

Themes

**Static
resources**

**Page
Anatomy**

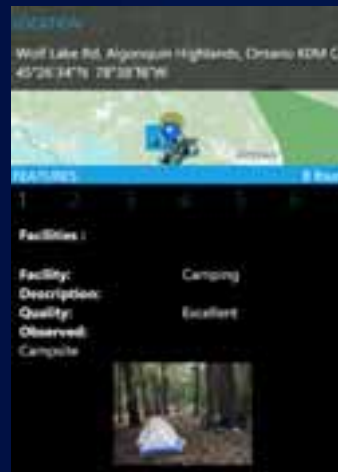
**Animations
&
Transitions**

**Device
Form
Factor**

**Execution
Model**

Effective Use of Data

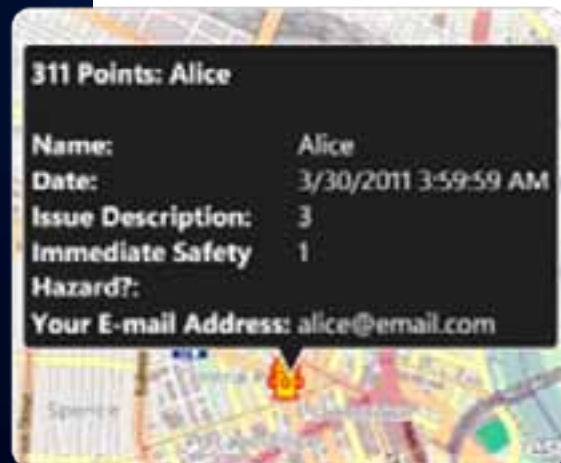
- Screen size
- Finger size
- Data transfer cost



```
<esri:GraphicsLayer ID="MyGraphicsLayer"  
    Renderer="{StaticResource MySimpleRenderer}">  
    <esri:GraphicsLayer.Clusterer>  
        <esri:SimpleClusterer  
            Radius="15"  
            Gradient="{StaticResource BlueGradient}" />  
    </esri:GraphicsLayer.Clusterer>  
</esri:GraphicsLayer>
```


Map Tips

- ESRI.ArcGIS.Client.Toolkit.InfoWindow
- Bind ContentTemplate to Popup if defined

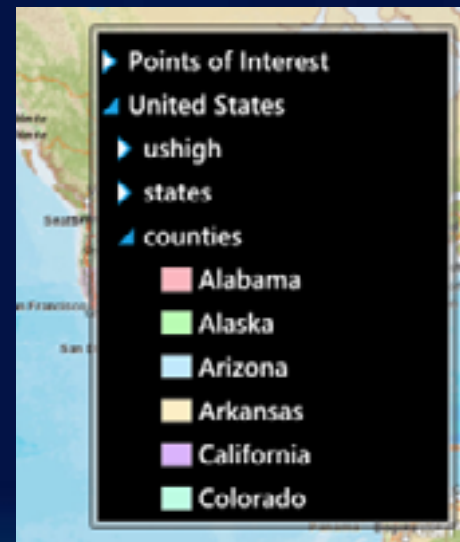


```
<esriToolkit:InfoWindow x:Name="myInfoWindow"  
Map="{Binding ElementName=myMap}"  
Background="{StaticResource PhoneChromeBrush}"  
BorderBrush="{StaticResource PhoneForegroundBrush}"  
ContentTemplate="{StaticResource defaultAttributes}"  
BorderThickness="2" />
```

```
public DataTemplate DefaultTemplate { get; set; }  
DataTemplate RetrievePopupTemplate(GraphicsLayer lyr)  
{  
    var template = lyr.GetValue(Document.PopupTemplateProperty)  
        as DataTemplate;  
  
    return template ?? DefaultTemplate;  
}
```

Legend

```
<esriToolkit:Legend Map="{Binding ElementName=MyMap}"  
  LayerIDs="Points of Interest, United States"  
  LayerItemsMode="Flat"  
  BorderThickness="0" />
```

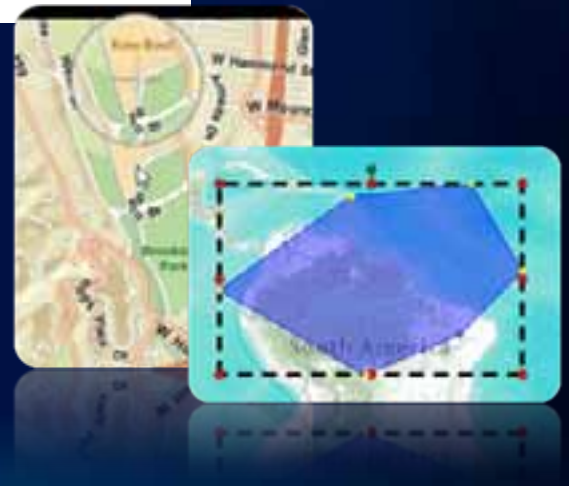


Editing

- ESRI.ArcGIS.Client.Editor vs. FeatureLayer
- Editor Commands
 - Select, Add, EditVertices, Delete, etc.

```
Editor editor = new Editor();
editor.Map = myMap;
editor.LayerIDs = new string[] { "myEditTargetLayer" };
if (editor.Add.CanExecute(10100)) // feature type id
    editor.Add.Execute(10100);
```

- Edit and draw magnifier
 - Interactive editing experience to support touch devices
- Attribute editing
 - TextBox InputScope
 - DateTime & ListPicker controls



Using the phone's GPS

- GPS + WiFi + Cellular radio
- User of the phone controls app access to GPS
- System.Device.Location.GeoCoordinateWatcher
- ESRI.ArcGIS.Client.Toolkit.DataSources.GpsLayer
- Testing: [Windows Phone GPS Emulator](#) (Microsoft)
- Consider: power consumption

```
<esriToolkitDS:GpsLayer ID="GPSLayer" />
```



Deployment



Deploying your ArcGIS app

- Read [ESRI's licensing agreement](#)
- Include [attribution](#)
- Fill out deployment questionnaire & email it to arcgis4windowsphone@esri.com
- [Publish](#) to Windows Phone Marketplace
 - Or publish to developer phones with Windows Phone deployment utility

Publishing to the Marketplace



Wrap-up



Road Ahead

- 2.2 API – Released June
 - 3.0 API Beta 1 – August
 - ArcGIS Server 10.1 Beta 1
 - 2.3 API – September
-
- **Road Ahead – ArcGIS for Windows Phone**
Thursday 11:05am Room 6B

More Windows Phone at the UC

- **Road Ahead – ArcGIS for Windows Phone**
 - Thursday 11:05am – 11:25am, Room 6B
- **ArcGIS API for Silverlight/WPF – An Introduction**
 - Wednesday 10:15am – 11:30am, Room 6E
 - Thursday 10:15am – 11:30am, Room 8
- **ArcGIS API for Silverlight/WPF – Advanced Topics**
 - Wednesday 1:30pm – 2:45pm, Room 8
 - Thursday 3:15pm – 4:30pm, Room 32B

More Windows Phone at the UC

Mobile Demo Theaters

- **Introduction to ArcGIS for Windows Phone**

- Wednesday 1:30pm – 2:00pm
- Thursday 9:00am – 9:30am

- **Using ArcGIS on Windows Phone devices**

- Wednesday 2:00pm – 2:30pm
- Thursday 9:30am – 10:00am

- **Developing applications for the Windows Phone platform**

- Wednesday 2:30pm – 3:00pm
- Thursday 12:00pm – 12:30pm

Please fill out your session surveys

www.esri.com/sessionevals





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