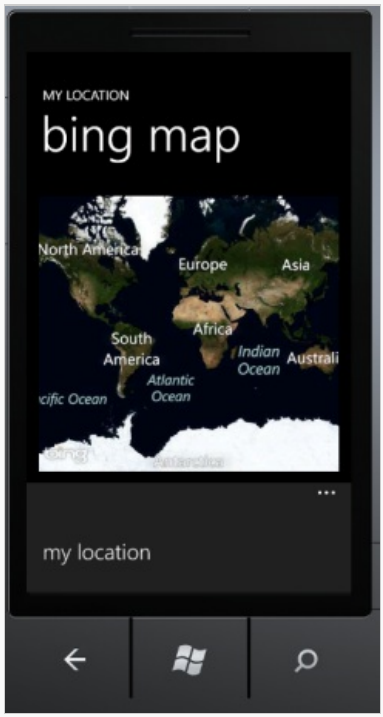
Plotting current position on the Map control in Windows Phone 7

This article demonstrates how to zoom to a user's position on a Sliverlight Map Control based on location information from the GeoCoordinateWatcher class.

Tip: For Windows Phone 8 Microsoft recommend developers switch to the new Windows Phone 8 Map Control which is now part of the SDK and uses the on-board HERE maps rather than use the control mentioned in this article.

Introduction

This example app creates a Map. When a user clicks on the *my location* menu, the app fetches the current location of the device and put the latitude and longitude in the Map in zoom view. The current location is retrieved using the GeoCoordinateWatcher class (from the `System.Device.Location` namespace).



Current Location

Implementation

First create a project with *Windows Phone Application* Template.

Create map (MainPage.xaml)

Once the project is created, drag and drop a new `Map` control onto the page from the Visual Studio 2010 Toolbox. This will generate the Map Control code in the XAML file.

```
<my:Map Height="408" HorizontalAlignment="Left" Margin="6,20,0,0" Name="map1"
VerticalAlignment="Top" Width="444" Mode="AerialWithLabels"
CredentialsProvider="{StaticResource BingMapsAPIKey}" >
</my:Map>
```

To use the map you need to get a Bing maps key, which can be obtained from http://www.bingmapsportal.com/. You can replace the `{StaticResource BingMapsAPIKey}` with your key (as shown below):

```
<my:Map Height="408" HorizontalAlignment="Left" Margin="6,20,0,0" Name="map1"
```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```
VerticalAlignment="Top" Width="444" Mode="AerialWithLabels"
CredentialsProvider="Anqep9VR0k6VxcmRp4qJ_AYWglilkC3B4c2QgZAgZTBS-bCr2GOI7iOopDGd-PXa" >
</my:Map>
```

Alternatively you can declare the `BingMapsAPIKey` static resource in your **App.xaml** file - note that this is recommended if you're planning on using the key anywhere else in the app.

```
<Application.Resources>
        <my:ApplicationIdCredentialsProvider
ApplicationId="Anqep9VR0k6VxcmRp4qJ_AYWglilkC3B4c2QgZAgZTBS-bCr2GOI7iOopDGd-PXa"
x:Key="BingMapsAPIKey"></my:ApplicationIdCredentialsProvider>
    </Application.Resources>
```

Get co-ordinates and zoom

Now we add the Menu with the name *My Location*. When user clicks on the menu it calls `ApplicationBarMenuItem_Click()`, which in turn has the code to get the location.

```
private void ApplicationBarMenuItem_Click(object sender, EventArgs e)
        {
            GeoCoordinateWatcher gcw;
            gcw = new GeoCoordinateWatcher(GeoPositionAccuracy.High);
            gcw.MovementThreshold = 20;
            gcw.StatusChanged += new
EventHandler<GeoPositionStatusChangedEventArgs>(gcw_StatusChanged);
            gcw.PositionChanged += new
EventHandler<GeoPositionChangedEventArgs<GeoCoordinate>>(gcw_PositionChanged);
            gcw.Start();
            map1.Center = new GeoCoordinate(gcw.Position.Location.Latitude,
gcw.Position.Location.Longitude);
            if (gcw != null) gcw.Stop();
            map1.ZoomLevel = 17;
            map1.ZoomBarVisibility = Visibility.Visible;
            map1.ScaleVisibility = Visibility.Visible;
        }
```

We create an instance of GeoCoordinateWatcher and set the accuracy to High and threshold value to 20 which is approx 20 meters around. Event GeoPositionStatusChangedEventArgs gets the updated **Status** and GeoPositionChangedEventArgs event gets the location data associated with the event, like the latitude and longitude. `Start()` method enables `PositionChanged` events and allows access to the Position property. Once we get this data we put the value in the map and display the location in map's center position. And finally Stops the GeoCoordinateWatcher from providing location data and events with `Stop()` method. We also set the zoom level property of the map.

Testing

This application has only been tested on emulator. The articles below discuss how to test maps on the emulator:

- Windows Phone GPS Emulator
- this.

Source Code

The full source code of the example is available here: File:MapControls.zip

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