Customizing the Operations Dashboard for ArcGIS

Kylie Donia and Tif Pun
Agenda

- Quick Intro to Operations Dashboard
- Customizing? Use add-ins!
- Developing add-ins
- Sharing add-ins
Quick Intro to Operations Dashboard
Summary of Dashboard

• Author
  - Create an operation view
  - Add widgets, map tools, and feature actions
  - Customize them

• User
  - Gets relevant information
Behind the scenes

Web map
<web map item ID>

Operation View

desktopLayout
map widget
  mapID: "<web map item ID>"
mapTools
featureActions
widgets
featureActions
Customizing? Use add-ins!
Types of add-ins

**Map tools**
- On map toolbar
- Interact with map

**Widgets**
- Show information
- Work with a set of data

**Feature actions**
- Act on a single feature
- Available through map and other widgets
Basics of add-ins

• Created with ArcGIS Runtime SDK for WPF
• Package together in a zip file
  - *.opdashboardAddin
• Share through ArcGIS Online or Portal for ArcGIS
  - Updates automatically
Behind the scenes

**Operation View**
- desktopLayout
- map widget
  - `mapID: "<web map item ID>"`
  - `mapTools`
  - `featureActions`
- widgets
  - `featureActions`
- `addlnIds { "<add-in item ID>" , ... }`

**Web map**
- `<web map item ID>`

**Add-In**
- `<add-in item ID>`
  - Assembly

Find and use an add-in
Developing add-ins
Overview

- Visual Studio 2012 & .NET 4.5
- ArcGIS Runtime SDK for WPF
- Use templates
- Implement ESRI.ArcGIS.OperationsDashboard interface(s)

```csharp
using ESRI.ArcGIS.OperationsDashboard;
using System.ComponentModel.Composition;
using System.Runtime.Serialization;

namespace OpsDashAddin1 {
    [Export("ESRI.ArcGIS.OperationsDashboard.Widget")]
    [ExportMetadata("DisplayName","Operations Dashboard Widget1")]  
    [ExportMetadata("Description","This is a new widget")]  
    [ExportMetadata("ImagePath","/OpsDash1;component/Images/Widget32.png")]  
    [ExportMetadata("DataSourceRequired",true)]  
    [DataContract]
    public partial class Widget1 : UserControl, IWidget, IDataSourceConsumer {
```
Building custom map tools

• Appear on map toolbars
• Use to interact with the map
• Can use a temporary toolbar
• IMapTool & IMapToolbar interfaces
Zoom to area tool

In the SDK!
Building custom widgets

• Dockable window
• Implements IWidget interface
• Most are tied to a data source
Building custom feature actions

- Shown on right-click
- No UI
- Command on a single feature
- Implement IFeatureAction

**IFeatureAction Interface**

- **Properties**: 
  - CanConfigure { get; } : bool

- **Methods**: 
  - CanExecute(DataSource dataSource, Graphic feature) : bool
  - Configure(Window owner) : bool
  - Execute(DataSource dataSource, Graphic feature) : void
Search Nearby feature action
Development Tips

- Support customization
- Make use of:
  - Data sources
  - Map widgets
  - Other custom widgets
  - UI settings
  - Built-in Dashboard styles
- Familiarize with WPF SDK & Dashboard samples
- Use templates (configured for testing)
Testing add-ins

- Templates already configured for testing
- Uses a copy of the app included in the SDK
Sharing add-ins
Sharing add-ins – Deploying

- Create the .opdashboardAddin file
- Upload to ArcGIS Online or Portal for ArcGIS
- Update it ‡ Upload again.
- Automatically available to users
Updating a custom map tool
## Additional Sessions

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Thank you...

Please fill out the session evaluation

Offering ID: 1443

Want the code? Download from ArcGIS Online or get it on Git! http://esri.github.io/

Online – www.esri.com/ucsessionsurveys
Paper – pick up and put in drop box