Operations Dashboard for ArcGIS: Extending the Functionality

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Agenda

Operations Dashboard in 45 seconds

Customizing? Use add-ins!

Developing add-ins

Sharing add-ins

Sneak Peek

Questions?
Operations Dashboard

In 45 seconds
Summary of Dashboard

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

<table>
<thead>
<tr>
<th>Map tools</th>
<th>Widgets</th>
<th>Feature actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>On map toolbar</td>
<td>Show information</td>
<td>Act on a single feature</td>
</tr>
<tr>
<td>Interact with map</td>
<td>Work with a set of data</td>
<td>Available through map and other widgets</td>
</tr>
</tbody>
</table>

*Operations Dashboard for ArcGIS: Extending the Functionality*
Behind the scenes

Operation View

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

Add-In <add-in item ID>

Assembly

Web map <web map item ID>
Overview

- ArcGIS Runtime SDK for WPF
- Visual Studio 2012 or 2013 & .NET 4.5 or later
- Use templates
- Implement ESRI.ArcGIS.OperationsDashboard interface(s)
- Two audiences: author configures, user executes
Building custom map tools

- Appear on map toolbars
- Use to interact with the map
- Can use a temporary toolbar
- IMapTool & IMapToolbar interfaces
Show images

Custom map tool
Building custom widgets

- Dockable window
- Implements IWidget interface
- Most are tied to a data source
Multi-value summary widget

Custom widget
Building custom feature actions

- Shown on right-click
- No UI
- Command on a single feature
- Implement IFeatureAction
Generate profile graph
Custom feature action
Development tips

• Support configuration

• Make use of:
  - Data sources
  - Map widgets
  - Other custom widgets
  - 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 & Updating add-ins

People

Share this operation view with others
Choose who you want to have access to this operation view

- Everyone
- Apps Demo Organization

The members of these groups:

- Operations Dashboard Demos
- Using Dashboard DS 2014
- Operations Dashboard Addins Group

Referenced items

- Drought Dashboard Shared
- World Traffic Service Public
- NEXRAD Base Reflectivity (WMS) Public

Update Sharing
Sharing & updating add-ins

1. Navigate to the directory where the add-in files are located.
2. Select the add-in to share or update.
3. Click on the 'Share' button and select the groups to share with.
4. Make the necessary code changes.

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Sneak Peek
The Future of Dashboard Development
Cross-platform Extensibility Framework

• Create add-ins to extend Operations Dashboard with custom Widgets, Map Tools, and Feature Actions
• Add-ins are Web Apps
• Written in JavaScript, HTML5, CSS
• Add-ins will reference the ArcGIS API for JavaScript to define necessary add-in objects
• Target 10.3 Release
Cross-platform Extensibility Framework (cont.)

- **Developer**
  - Write HTML/JavaScript Add-in web app using ArcGIS API for JavaScript
  - Host the web app on a on-premise web server *(url)*
  - Web app *url* to be referenced as Ops Dashboard *Web Add-in* item in portal

- **Author of Operation Views**
  - Browse and use an Ops Dashboard *Web Add-in* within an operation view
  - The operation view contains the reference to the Ops Dashboard *Web Add-in* item

- **User**
  - When opening an operation view, Operations Dashboard (Windows / Browser) accesses the *Web Add-in* item and gets the *url* to the Add-in web app
  - *Web Add-in* loaded in a Web Browser control (Windows app), or iFrame element (browser app)
  - Web Add-in is sandboxed
Thank You!

**Thurs. 3:15pm** ArcGIS Apps: The Road Ahead


http://links.esri.com/wpfsdk

Session & sample code: http://esri.github.io/

Survey Offering ID: 1400
www.esri.com/ucsessionsurveys