Operations Dashboard for ArcGIS

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Agenda

- Product overview
- Workflow
  - Creating operation views
- Extensibility
- Road ahead
- Summary
The ArcGIS Platform enables Web GIS
Enabling GIS Everywhere

Simple
Integrated
Open

Available in the Cloud . . .
. . . and In Your Own Infrastructure
Optimizing Field Operations With ArcGIS

Operations Dashboard for ArcGIS

Survey123 for ArcGIS
Collector for ArcGIS

ArcGIS for Desktop

Workforce for ArcGIS

Navigator for ArcGIS

Field Operations
Operations Dashboard for ArcGIS – Customer Examples

Boston Marathon

Independence Day Event security

City of Boston
Operations Dashboard for ArcGIS – Customer Examples

Flood Monitoring
US Army Corps of Engineers
Texas

Race Monitoring
Ironman World Championship
Hawaii
Operations Dashboard for ArcGIS

- Configurable App that provides a common operating picture of systems and resources in your organization
- Enables monitoring, tracking, and reporting on assets
  - Support for real-time data
  - Includes key performance indicators (KPIs)
- Designed to support full spectrum of device platforms
- Cross platform extensibility and framework
Key Usage Patterns

• Monitor and manage operations/assets
  - Consume real-time data feeds
  - Provide common operational picture

• Emergency Management
  - Manage planned and unplanned events
  - Situational awareness

• Executive summaries and reporting
  - Visualize key performance indicators (KPIs)
2 Options to Work with Operations Dashboard

1. **Windows Desktop app**
   - Separate download, stand-alone application
   - Authoring and viewing app
   - Supports single display and multidisplay view
   - Requires ArcGIS account

2. **Web-browser based app**
   - Access within ArcGIS Online and Portal for ArcGIS
   - Viewing app
   - Supports single display view only
   - Supports anonymous access
Operations Dashboard for ArcGIS

- **Works with** **Operation View**
  - Consists of web map + widgets (info panels)
  - **Widget** → component that provides a specific type of functionality in the view

- **When authoring operation view**
  - Only in Windows Desktop app*
  - Single display or multidisplay view
  - Configuration user experience
    - No programming/development needed

*Authoring will be possible in Web browser app in future release in Beta NOW
Operations Dashboard for ArcGIS – Workflow

1. **Author web map**
2. **Create operation view**
   - Decide single display vs. multidisplay
   - Configure data sources, widgets, map tools, feature actions
   - Position widgets in view layout
3. **Share operation view with others**
   - ‘Operation view’ is an item in ArcGIS organization
Authoring Web map – Recommendations

- For data layers
  - Set layer refresh interval
  - Set reference URL, if they have an attribute that references images that are updated

- Define spatial bookmarks
Types of Operation Views

• **Single display view**
  - Required for web browser app
  - Supports single map widget
  - Widgets are organized into panels

• **Multidisplay view**
  - Supports multiple map widgets
  - Widgets can be organized across multiple displays
  - Widgets can be sized, positioned, and docked anywhere in display

• Unattended display vs. interactive display
Configure Operation View

- 4 properties to configure
  1. Data sources
  2. Widgets
  3. Map tools
  4. Feature actions
Configure Operation view – Data Sources

- **Data sources** → input data for widgets

- 2 options:
  1. From the web map
     - Select data layers in the web map
     - Determine if feature content(s) are selectable
  2. External source
     - Can add data from your ArcGIS organization and ArcGIS Servers

- Optional: define queries on data source(s)
- Works with real-time data
  - Input feature services
Configure Operation view – Widgets

- **Widgets** → component that provides a specific type of functionality in the view
  - Add to view (set position in UI), then configure its properties
  - Are dynamic and interactive
  - Optional: set feature action
    - Depends on the widget type
Available Widgets

• Map widget
Configure Operation view – Map Tools

- **Map tools:** → action(s) that lets you do something on the map
  - “Functionality” in map widget
  - When enabled, a toolbar displays in the map widget
Configure Operation view – Feature Actions

- **Feature actions** → action that you can apply to feature(s), see result in the map
  - Enable in widget configuration
  - Example
    - List widget > Follow a feature, highlight a feature, select a feature, …
Configure Operation View – User Interface

- Position widgets in operation view UI
  - Depends on single display vs. multidisplay
    - Single display has layout and panels
    - Multidisplay provides more flexibility

- Set text size

- Set theme
  - Light, medium, or dark
Customizing Operation Views

- Extend functionality with custom widgets, map tools, and feature actions
  - Create extensions to enable your organization’s business logic
- Develop with the ArcGIS API for JavaScript*
  - JavaScript API v3.14 or later
- Extensions are hosted on your own web server
  - Consists of 3 files: JSON manifest file, HTML container, and JS file
  - Can reference other files and resources
- Register extensions in ArcGIS organization, then share

*Legacy: ArcGIS Runtime SDF for WPF for Desktop app
Next Update: Operations Dashboard for ArcGIS v1.0

FYI: All content in this section is NOT final and may change

• Next generation web-browser based app

• Key enhancements
  - Authoring Dashboards
  - New operation view layout supports both unattended and interactive displays
  - Many widget productivity and configuration improvements
    - Modernized filtering and charting capabilities
  - New home page to help manage views

• Schedule release: TBD, in Beta now
Operation View

- Single display and multidisplay views are merging into a unified Dashboard
- Designed to support both unattended and interactive displays
Widget Configuration

- Simplified workflow, new dialog design
- Filter capability improvements
  - Easier and more intuitive UE
  - E.g., dates and time periods
  - Support of ‘IN’ where clause
  - Support for domains
- Improved selection UE
Charting Improvements

• Support for multi-series bar charts
• New appearance options
  - Manual bar colors
  - Bar colors matching symbology
Cartographic Enhancements in Map

• Support for
  - Labels
  - Vector tiles
  - Smart mapping
  - Visualizing stream services
    - Real-time data from GeoEvent Server
  - Multiple maps

• Map tool improvements
  - Collaborating with Workforce for ArcGIS pop-ups and selection
Road Ahead

- What’s coming AFTER the v1.0 release
- Data
  - Related records/relationship classes and query layers
- Interactive filters
  - E.g., Filter crimes by date range, district and crime type
- Map display
  - Aggregation/clustering and 3D web scenes
- Charting
  - New chart types (e.g., multi-series line charts)
- Alerts
Resources

- Operations Dashboard for ArcGIS help documentation
- Operations Dashboard for ArcGIS: Monitor Your Operations video
- Live training seminars
  - Monitoring Data Using Operations Dashboard for ArcGIS
  - Power Decision Making with Operations Dashboard for ArcGIS
- GeoNet space
  - https://geonet.esri.com/community/gis/applications/operations-dashboard-for-arcgis
Summary

• Questions?
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