esri

Working with Feature Layers
in the ArcGIS API for JavaScript

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slides: https://git.io/fhp4D

SEE
WHAT
OTHERS
CAN'T

Agenda

- Types of feature layers
- Rendering
- Labeling
- Querying
- Editing features

Feature Layer powered by

- Feature Services
- Feature Collections
- Portal Item

Bringing a feature layer into your app

- FeatureLayer by URL

```javascript
const layer = new FeatureLayer({
  url: "https://<url to my server>/FeatureServer",
  layerId: 0,
  renderer: { ... },
  popupTemplate: { ... },
});

map.add(layer);
```

Demo

Bringing a feature layer into your app

Restrict data retrieved from the feature service

- to work with a subset of features
- to remove features with `null` attributes.

```
layer.definitionExpression = "STATE_NAME = 'California'";
```

Demo

Bringing a feature layer into your app

FeatureLayer by portal item

```javascript
const portal = new Portal({
  url: "https://jsapi.maps.argis.com"
});

const layer = new FeatureLayer({
  portalItem: {
    id: "bca022ee5d9440c9b60399ee4d809d9b",
    portal
  }
});


map.add(layer);
```

Demo

Bringing a feature layer into your app

Alternative: using `Layer.fromPortalItem()`

```javascript
Layer.fromPortalItem({
  portalItem: {
    id: "82d8d8213afc4bb380bb16083735f573"
  }
})
.then((layer) => {
  map.add(layer);
});
```

Demo

Rendering

A renderer defines how the `FeatureLayer` is drawn.

- SimpleRenderer
- ClassBreaksRenderer
- UniqueValueRenderer
- HeatmapRenderer
- DotDensityRenderer

Guides are available in the API:

- Visualization Overview guide
- Renderer API reference

Building a renderer

- simple renderer
- visual variables
- smart mapping APIs
- smart mapping sliders
- loading from portal

Rendering... next steps

ArcGIS Online:
Using Map Styles to Discover and Define Your Web Map's Purpose

Wednesday, July 10
4:00 pm - 5:00 pm
Room 17 B

Labeling

Label features to show relevant information at a glance

- simple labels
- where clause
- multiple labels classes
- min/max scale ranges
- complex labels

Query the data from the server

Bring features from your data to the web browsers.

- ## Attribute queries

  select only features passing a WHERE SQL clause

- ## Spatial queries

  select only features passing a spatial filter

- ## Statistic queries

  returns statistics about the selected features

  ## API Reference

Query the data from the server

- queryFeatures()
- queryFeatures() - by distance
- queryFeatures() - pagination

Query the data client-side

Query data already in the web browser

- really fast queries
- avoid round-trips to server
- only works with what is available

Client-side statistics

Querying... next steps

Interactive Client-Side Web Mapping with the ArcGIS API for JavaScript

Wednesday, July 10
10:00 am - 11:00 am
Room 15 B

Editing

Updating features directly in the web browser

Editing

How do I know if I can edit features?

- REST Supported Operations
- ArcGIS Online / Portal Settings
- ArcGIS Server Manager

Editing

Two ways to edit features:

- applyEdits()

- Editor widget

applyEdits()

```javascript
const featureLayer = new FeatureLayer;
const addFeatures = "new feature(s)";
const updateFeatures = "updated feature(s)";
const deleteFeatures = "removed feature(s)";

featureLayer.applyEdits({addFeatures, updateFeatures, deleteFeatures});
```
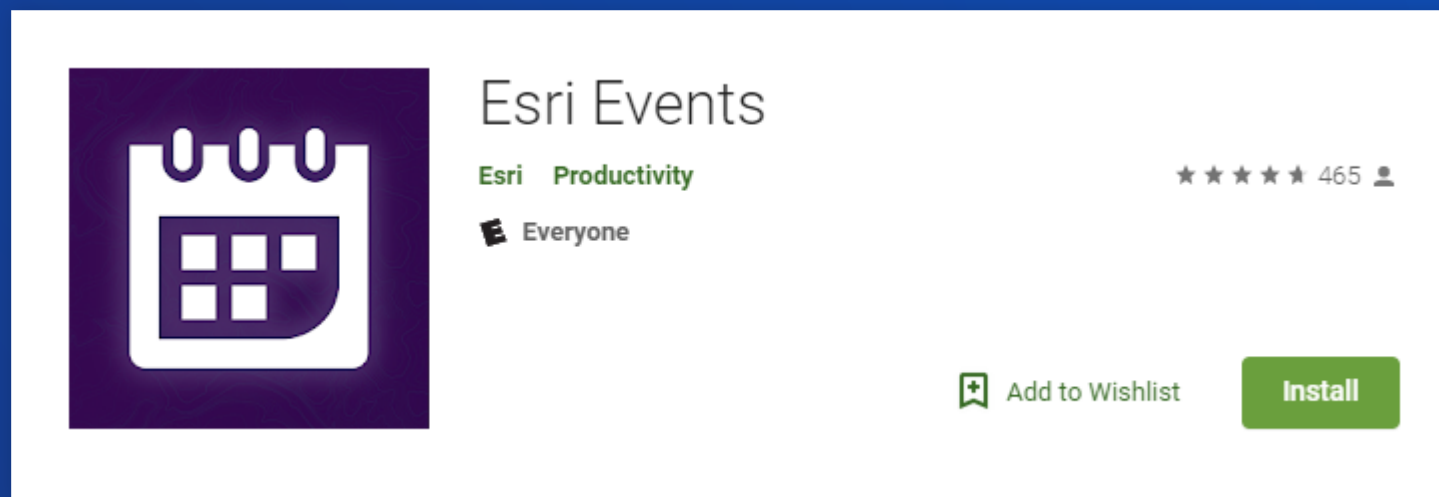
sample

Editor widget

```
const editor = new Editor({
  view: view
});


view.ui.add(editor, "top-right");
```

sample

Related JavaScript Sessions at the UC

ArcGIS API for JavaScript: What's New
Wednesday (1pm - 2pm)

Customizing ArcGIS API for JavaScript Widgets
Wednesday (2:30pm - 3:30pm)

Editing with the ArcGIS API for JavaScript
Wednesday (4pm - 5pm)

Building 3D GIS Applications with JavaScript
Thursday (8:30am - 9:30am)

Building Web Apps with the ArcGIS API for JavaScript
Thursday (4pm - 5pm)
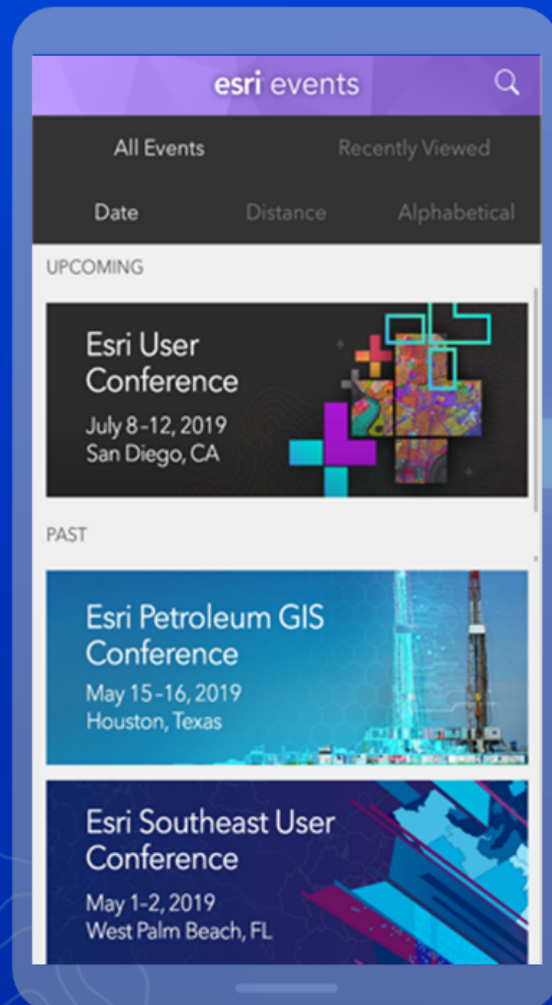
Questions?

Share your apps and suggestions with us…

- Your apps!
- Your impressions on the latest API
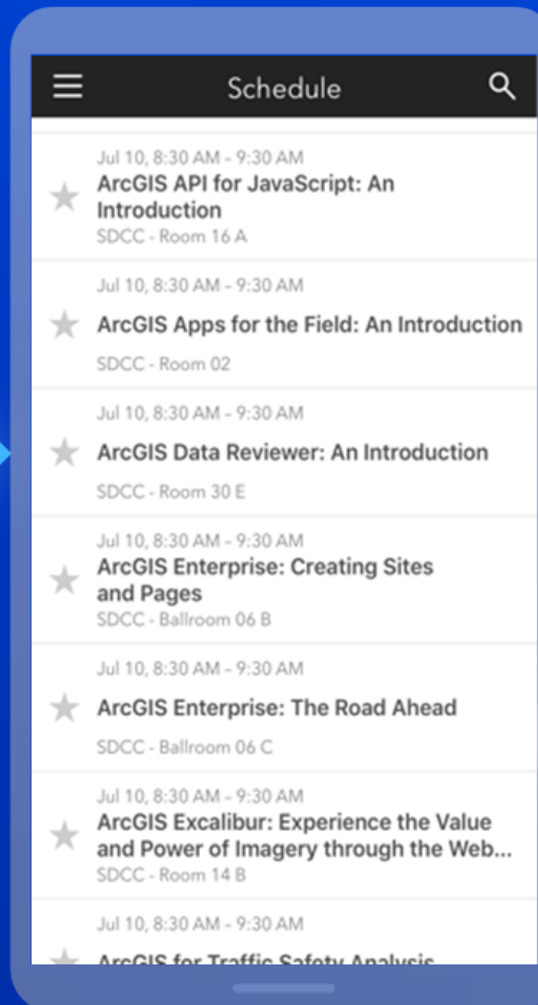- Ideas for next UC or Developer Summit related to web development

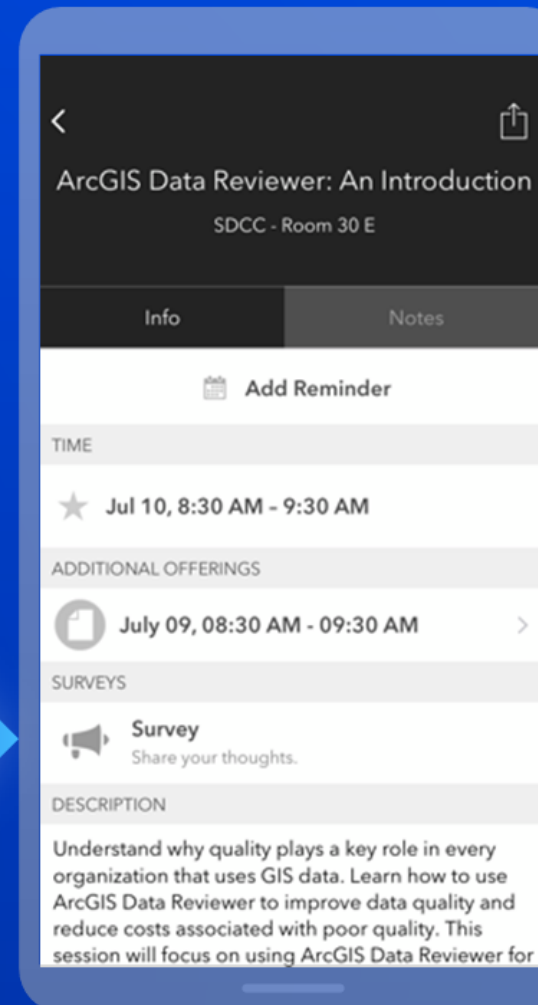jsapi_pm@esri.com

Please Share Your Feedback in the App

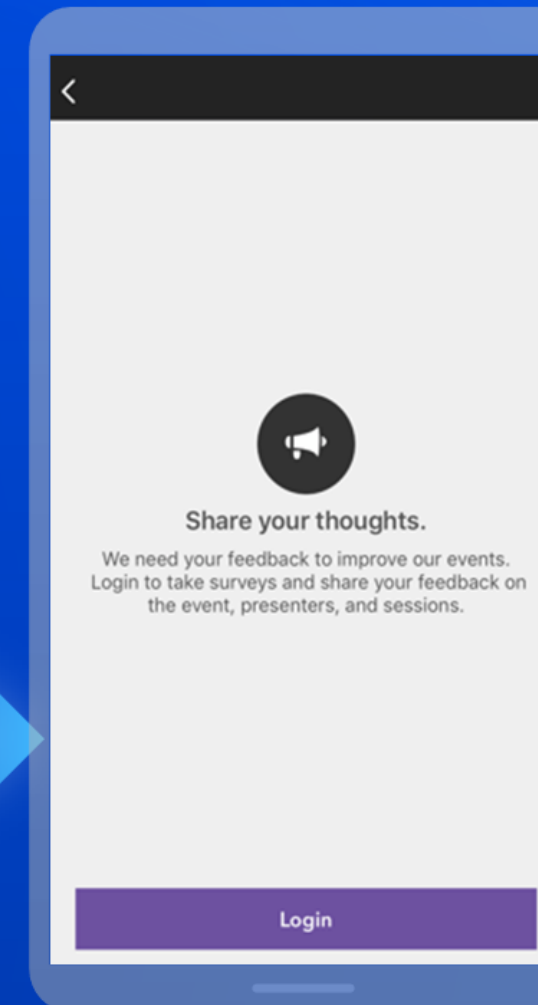**Download the Esri Events app and find your event**

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