Esri International Developer Summit

Palm Springs, CA

Transitioning to JavaScript:
What to Expect
&
How to Quickly Come Up to Speed

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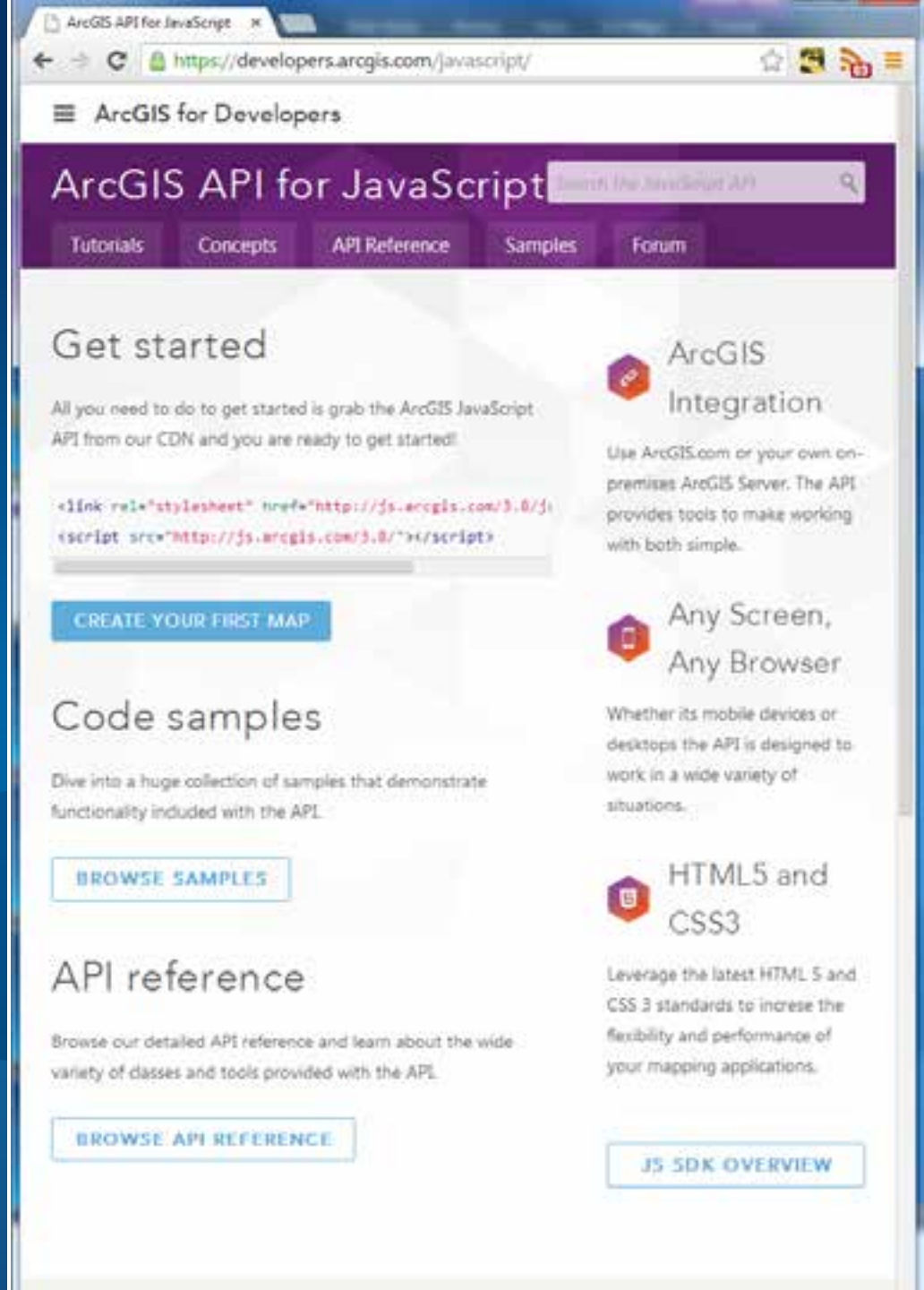
In this session…

JavaScript

Programming language
IDE(s)
Debugging



Javascript or ActionScript?

```
if (condition) {
    // statement(s)
} else if (condition) {
    // statement(s)
} else{
    // statement(s)
}
```

```
switch (expression) {
    case "case1":
        /* statements */
        break;
    case "case2":
        /* statements */
        break;
    default:
        /* statements */
        break;
}
```

console.log and alert

```
for (var key in myObject)
{
    // instead of trace
    console.log("Value of " + x + " is " + oo[x]);

    // instead of Alert.show()
    alert("Hello World");
}
```

Many choices for IDE

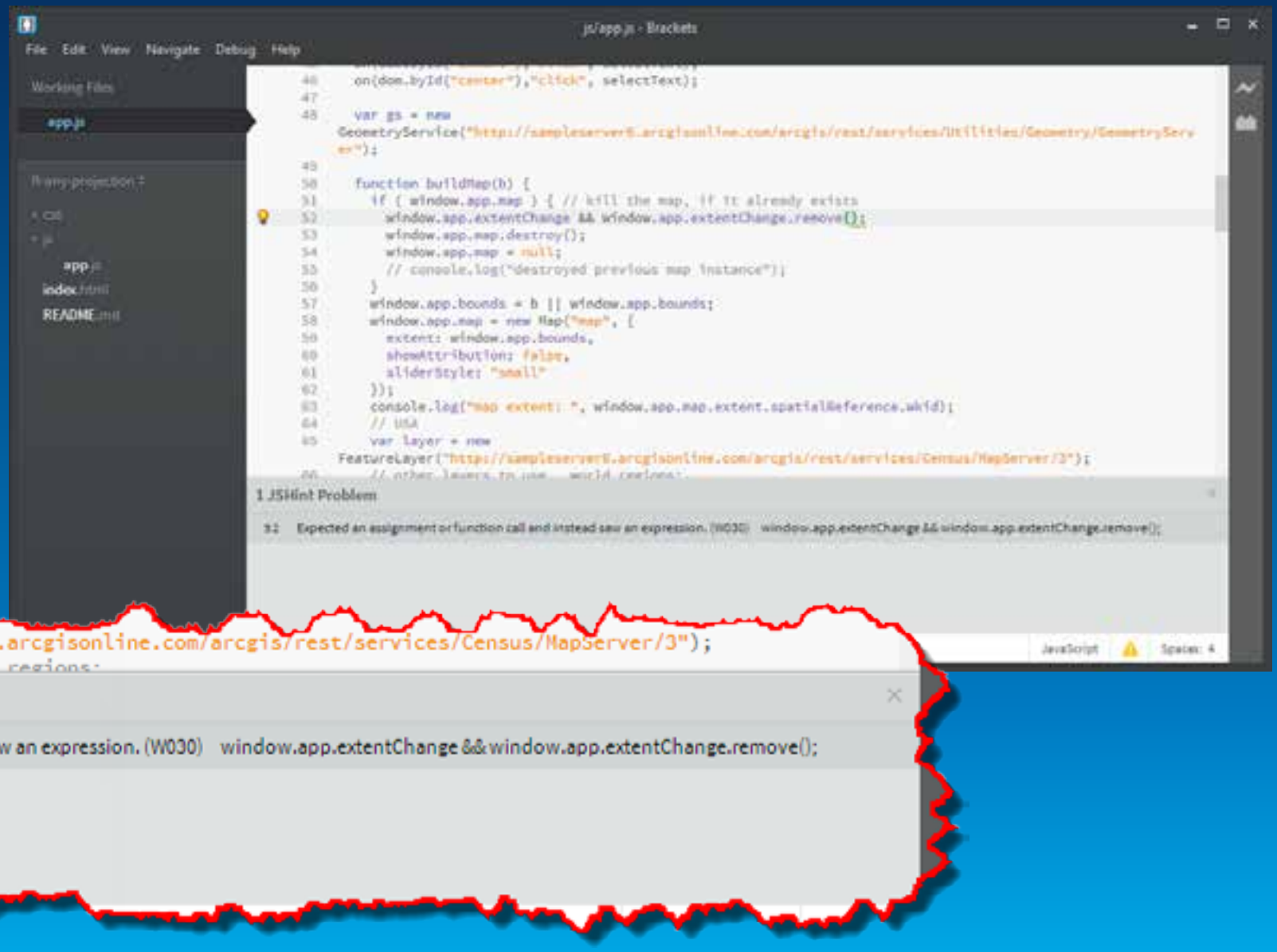
- Brackets
  - “open source code editor for web designers and front-end developers”
- Sublime Text
  - “sophisticated text editor for code, markup and prose”
- WebStorm (or IntelliJ) from JetBrains
  - “The smartest JavaScript IDE”
- Chrome DevTools
- …

Browser DevTools

- **Debugging tools are built-in to every modern browser**
  - **Chrome Developers Tools (DevTools)**
  - **Firefox Developer Tools**
  - **IE 9+: F12 Developer Tools**

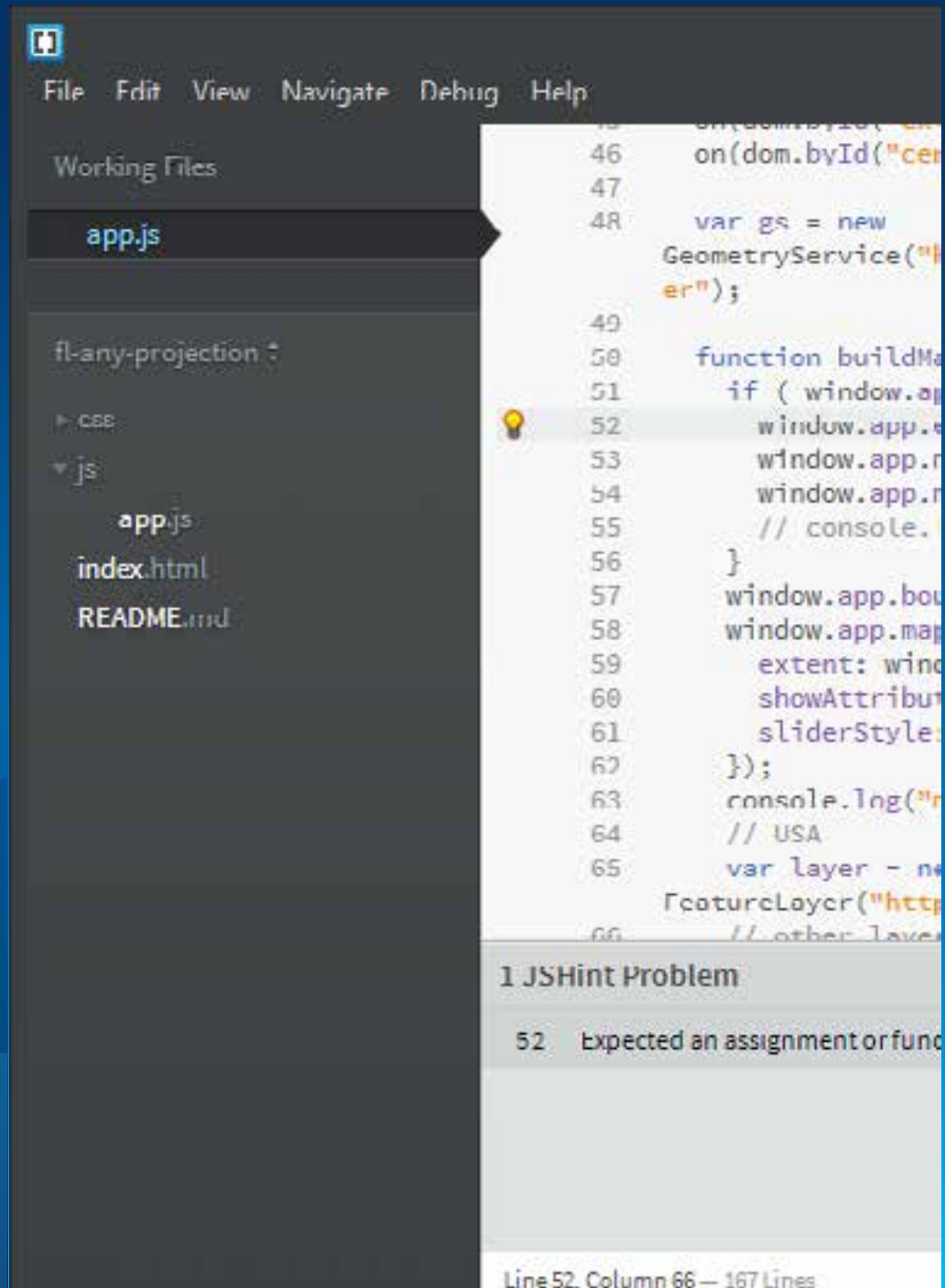
Code Quality Tools

- JSHint
  - forked from JSLint



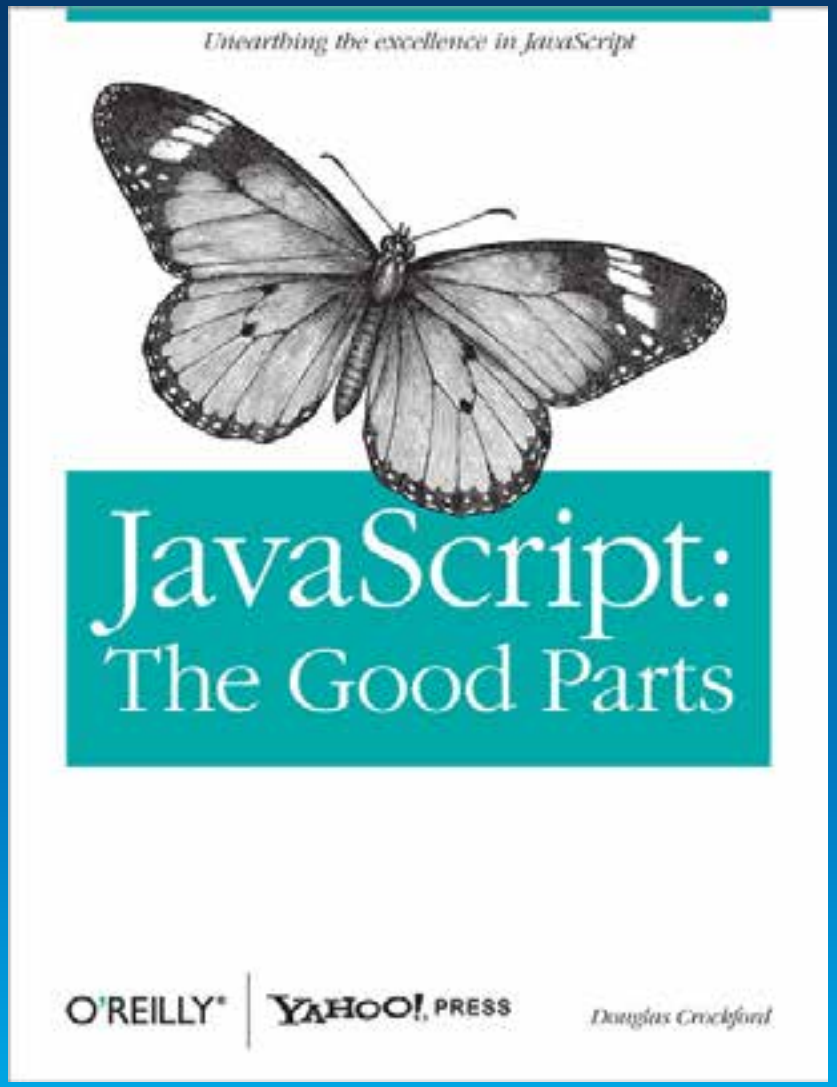
Demo

- js.arcgis.com
- Brackets
- JSHint



Let’s get real…

https://github.com/ycabon/transitioning-to-javascript


Unearthing the excellence in JavaScript
JavaScript:
The Good Parts
O'REILLY
YAHOO! PRESS
Douglas Crockford

First application

- Use the API
- Bootstrap for styling
  - Nice look
  - Responsive
- 2 components:
  - A geocoder
  - A list of basemap

First application

- Bootstrap
  - Created by Twitter
  - Tools for creating websites and web application
  - Provide a large set of UI components
  - Use of Bootstrap Map JS
- AMD
  - Asynchronous Module Definition
  - Allow us to encapsulate some piece of code into multiple files: modules
  - A module can depend on others
- Dojo and a bit of dijit

First application

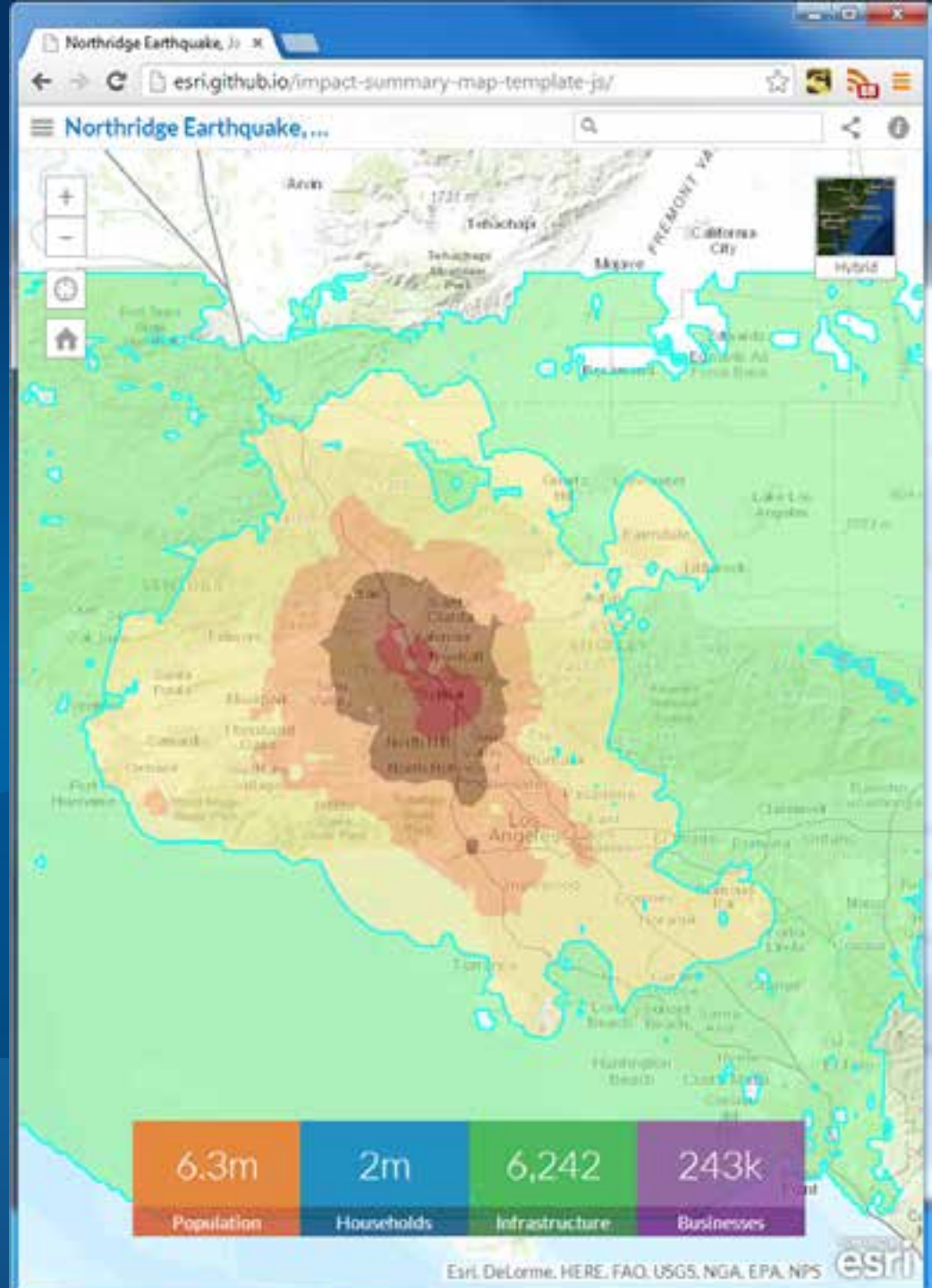
- AMD
  - Module definition: `MyModule.js`

```
define(['dep1', 'dep2'], function(dep1, dep2) {
  return {
     add: function(x, y){
         return console.log(x + y);
     }
  };
});
```

- Module usage

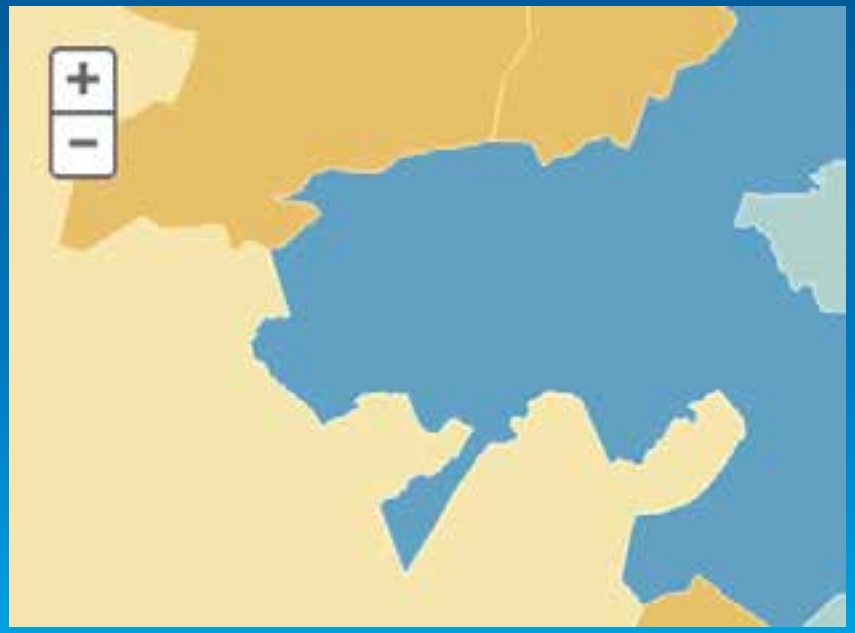
```
require(['MyModule'], function(MyModule) {
  MyModule.add(2, 3); // print 5
});
```

Apps, templates, viewers



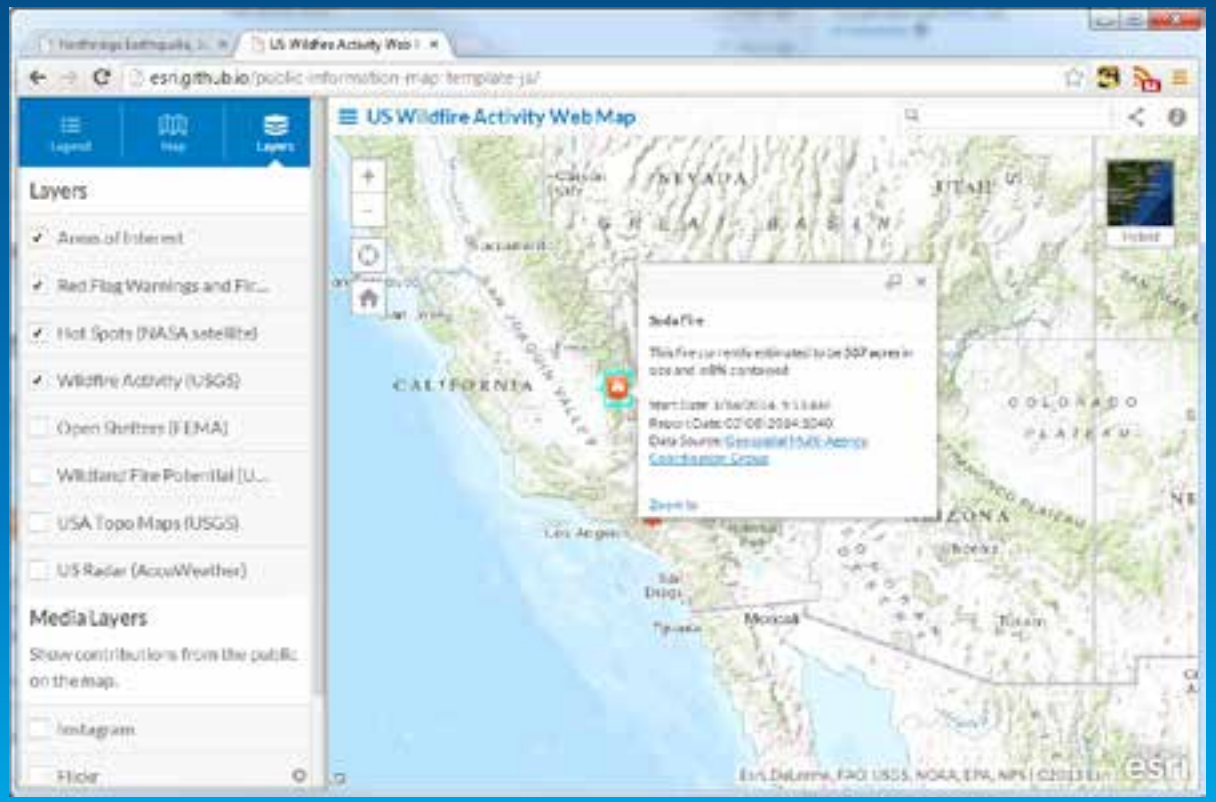
Boilerplate

- https://github.com/Esri/application-boilerplate-js
- http://blogs.esri.com/esri/arcgis/2013/08/29/step-up-to-the-boilerplate/

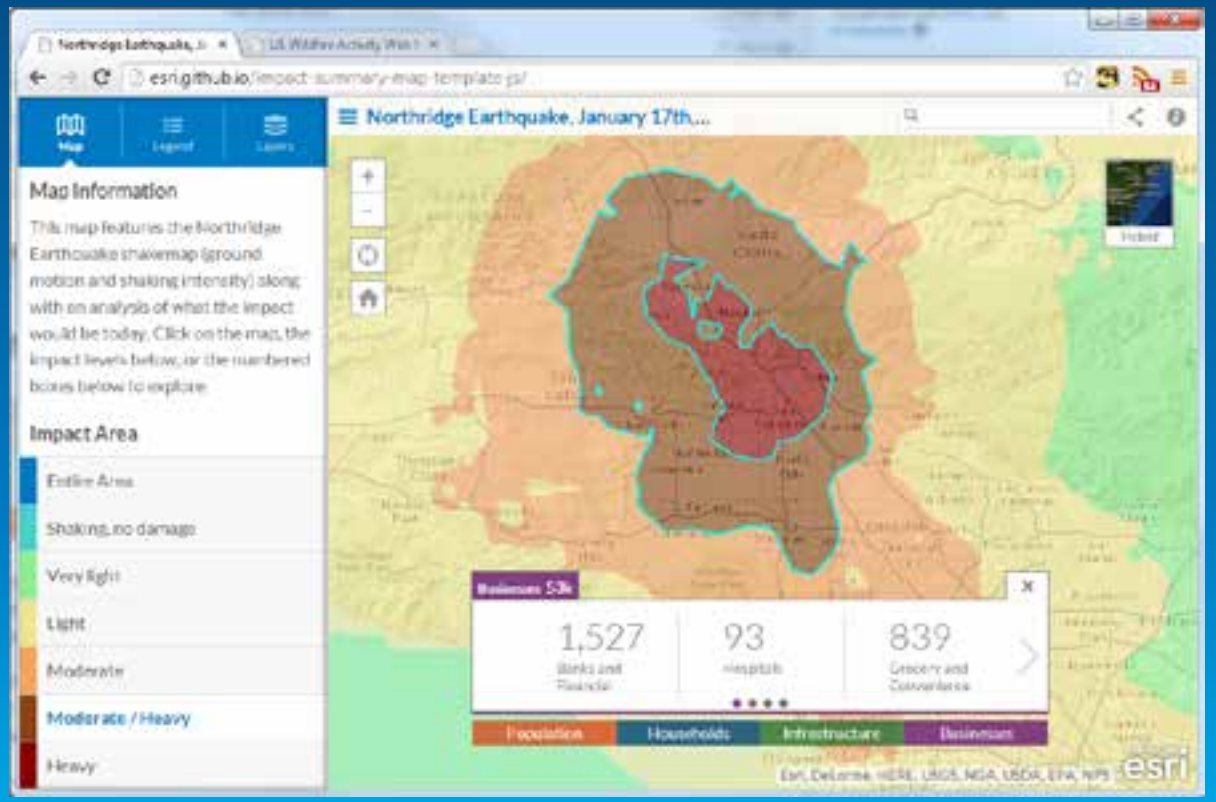


Templates

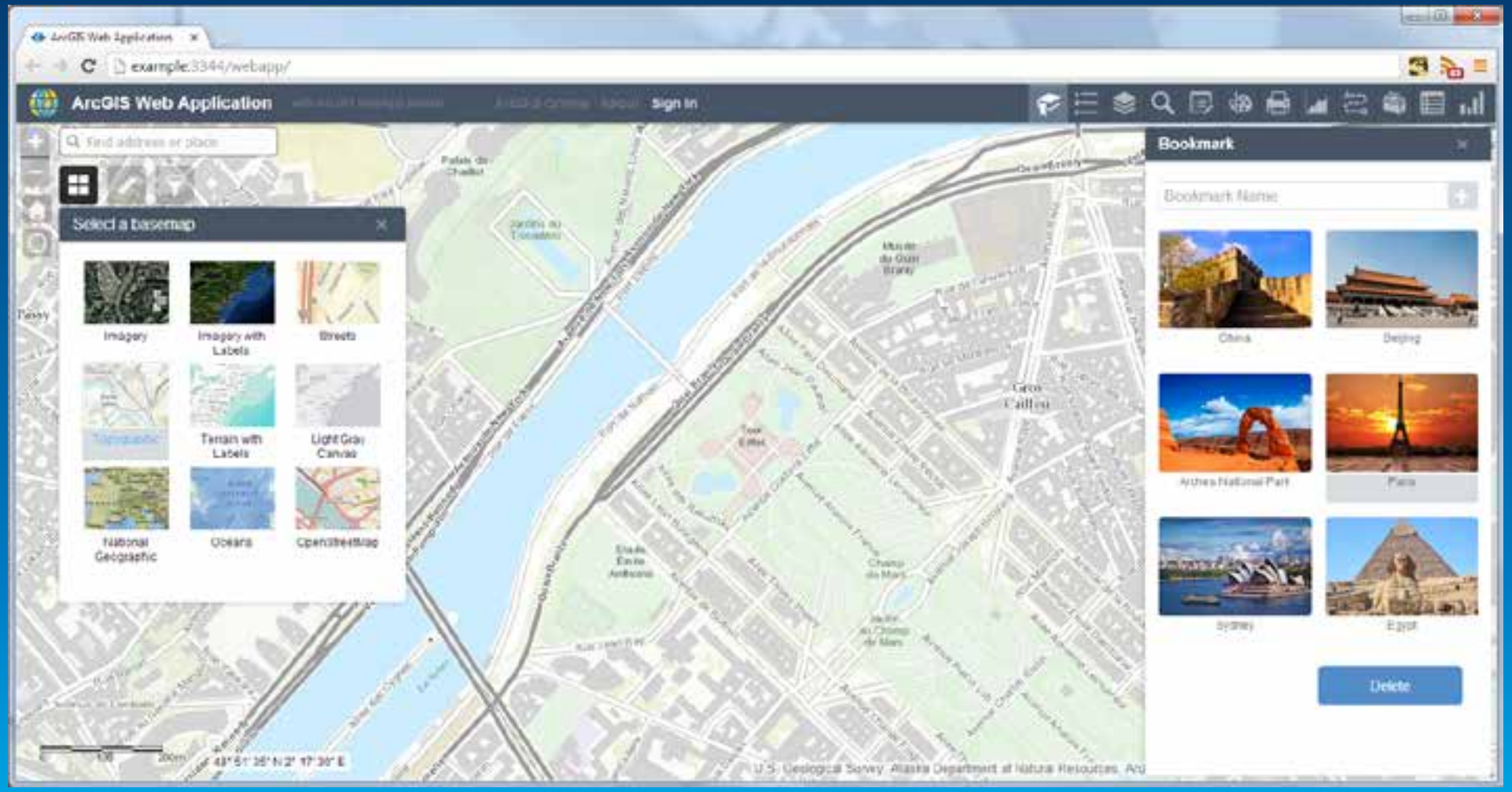
[public-information-map-template-js]



[impact-summary-map-template-js]



ArcGIS WebApp Builder



Proxy and CORS

Cross-Origin Resource Sharing (CORS)

- to loosen up the same-origin policy
- since ArcGIS for Server 10.1

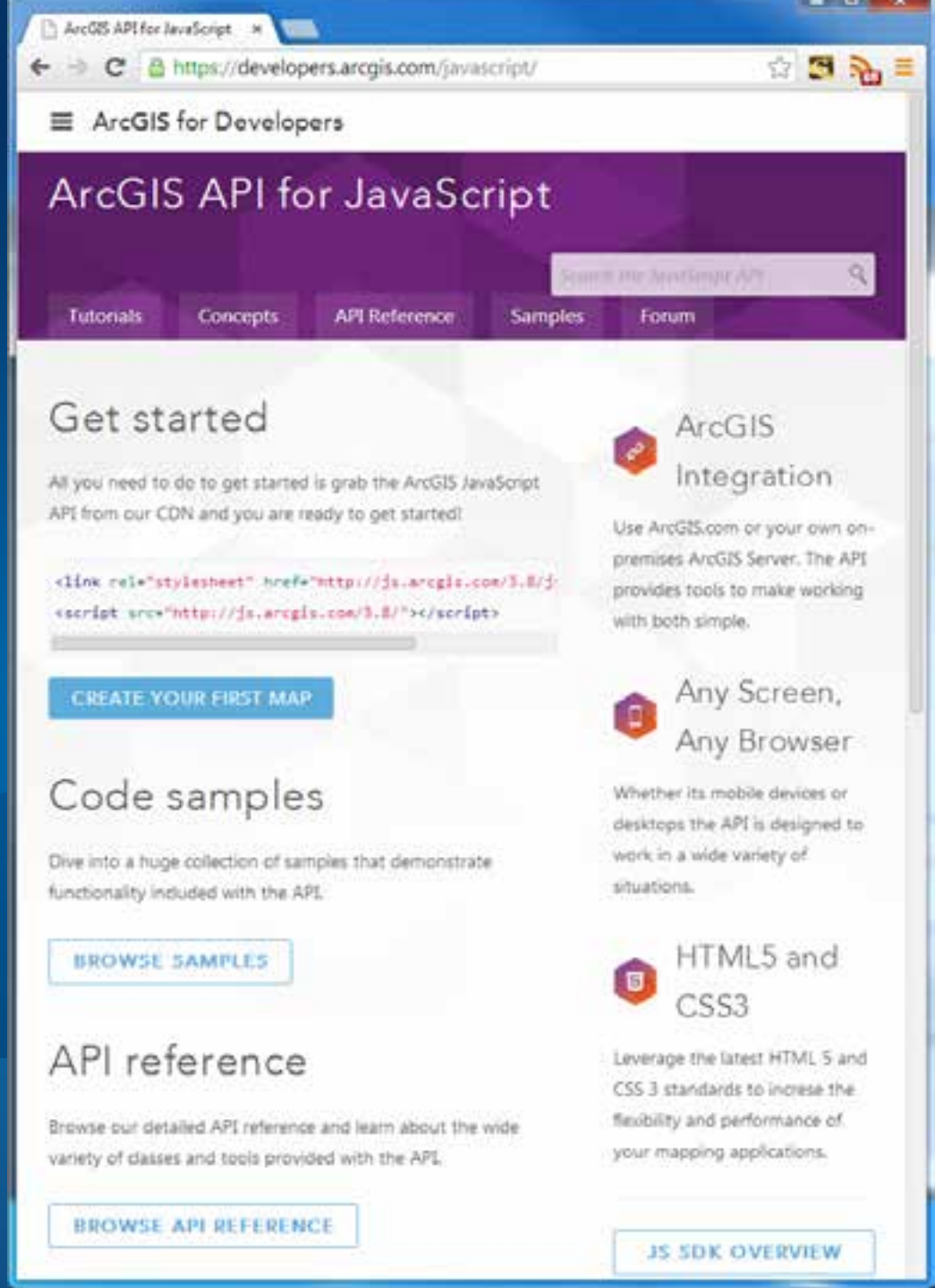
Proxy

- For URLs that are POST’ed (long URLs)
- When uploading files using Internet Explorer
- For security reasons (non-user token generation)
- For getting around same-origin policy – when CORS is not an option

Other tools

- **Web Components**
  - **Allows developers to create easy to reuse components**
  - **A component can define new HTML tags, like: `<esri-map>`**
  - **The specification is on going**
  - **Polymer project a set of polyfills to create WebComponents now.**
- **Automation tools**
  - Grunt
- **CSS Pre-processors**
  - SASS
  - LESS
- Dijits and Bootstrap with Bootstrap theme and Dojo Bootstrap

Additional resources



Check out additional presentations

- **Wednesday 10:30 - 11:30: Customizing and Extending the ArcGIS Web App Builder**
- **Thursday 1:00 - 2:00: Introduction to the ArcGIS Web App Builder: JavaScript Apps Made Easy**
- **Thursday 2:30 - 3:30: Customizing and Extending the ArcGIS Web App Builder**

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Q & A

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