Introduction to the ArcGIS API for JavaScript

Julie Powell

Jeff Archer

Agenda

- Getting started with the JavaScript API
- Better Mapping
- Mobile Development & HTML5
- Roadmap
- Security

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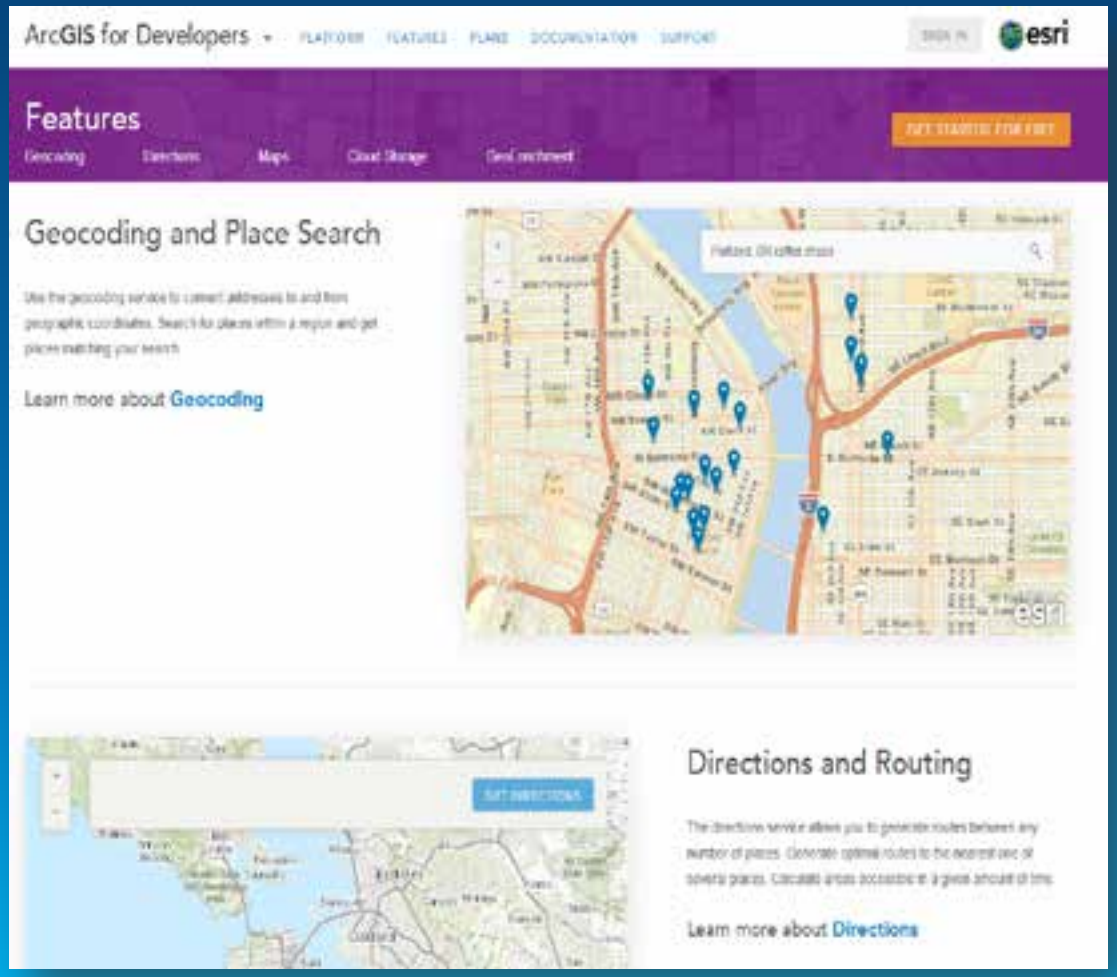
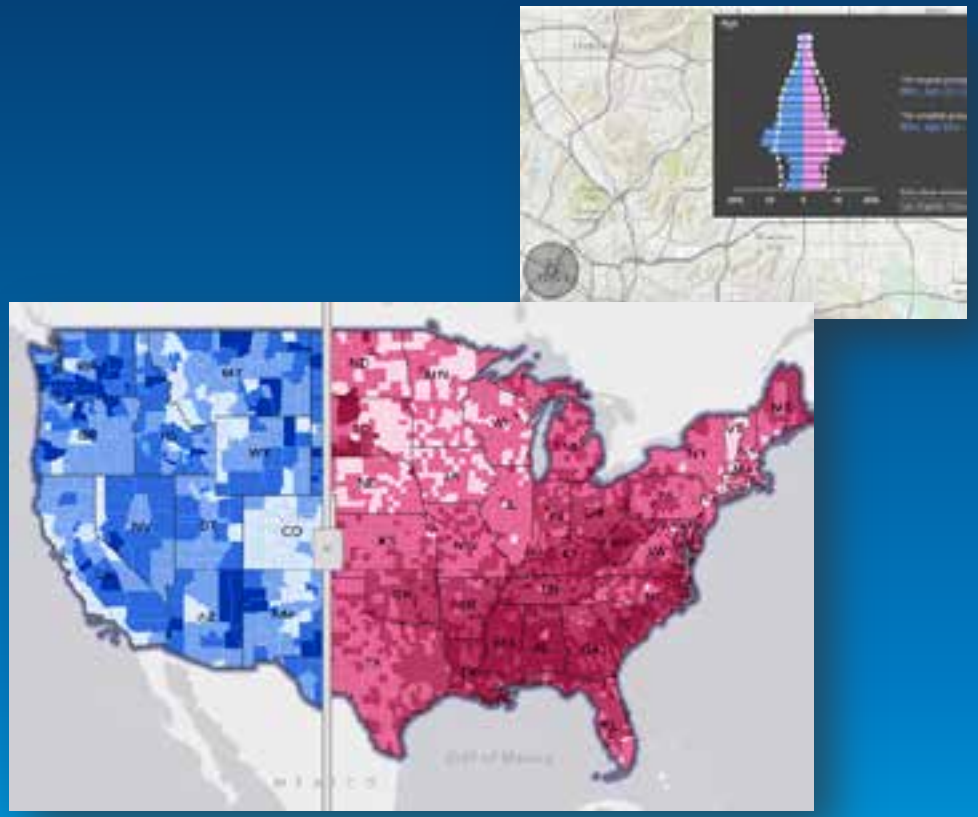
Developers website



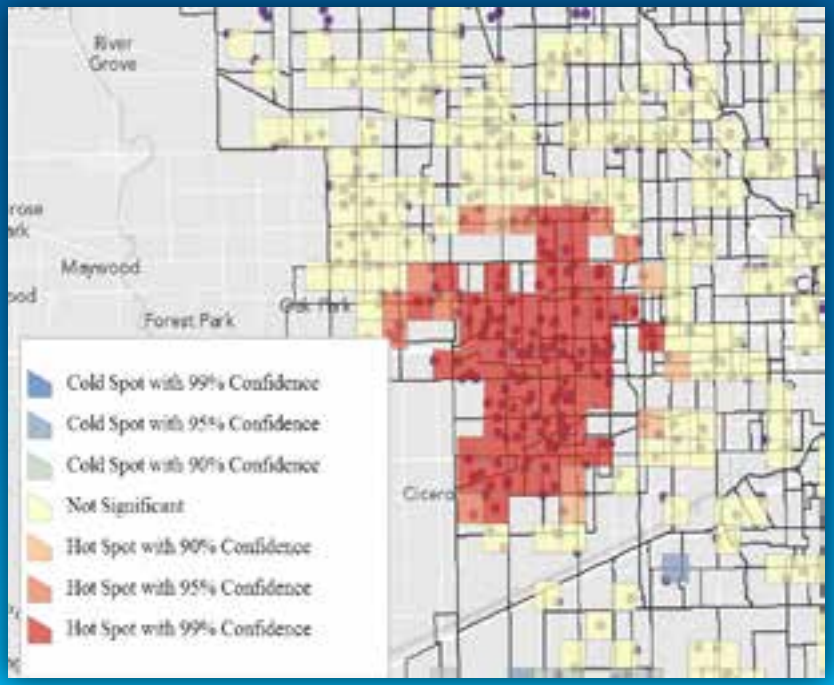
ArcGIS for Developers
PLATFORM
FEATURES
DOCUMENTATION
SUPPORT
esri
ArcGIS API for JavaScript
Tutorials
Concepts
API Reference
Samples
Forum
Get Started
Work through a tutorial to build your first web application using the ArcGIS API for JavaScript.
LET'S GO
Get Help
Resources ranging from learning JavaScript to places to ask targeted ArcGIS API for JavaScript questions.
ENGAGE
HTML5 and CSS3
Various HTML5 components are integrated in the API and we provide samples for others.
DEVELOP IT
Tons of Samples
Dive into a huge collection of samples that demonstrate functionality included with the API.
EXPLORE
Cloud Friendly
Use ArcGIS.com or your own on-premises cloud. The API provides tools to make working with both simple.
CHOOSE
Browser Support
Chrome, Safari, Firefox and Internet Explorer, as well as mobile browsers, just work.
LEARN MORE

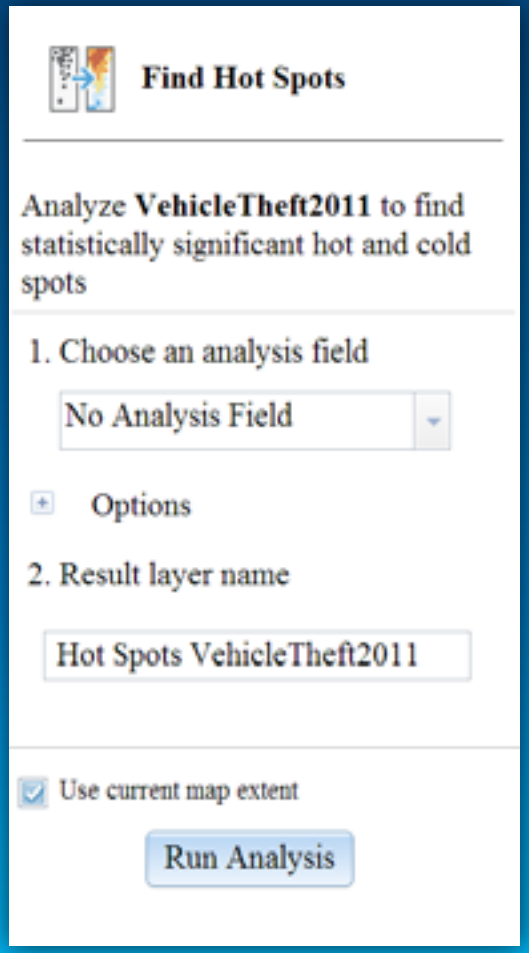
Widgets

- Geolocation
- Geocoder
- Directions
- Printing
- Identity Manager
- Legend / Scalebar
- Measurement
- Basemap Gallery
- GeoEnrichment
- Histogram
- Swipe
- …



New Analysis Widgets

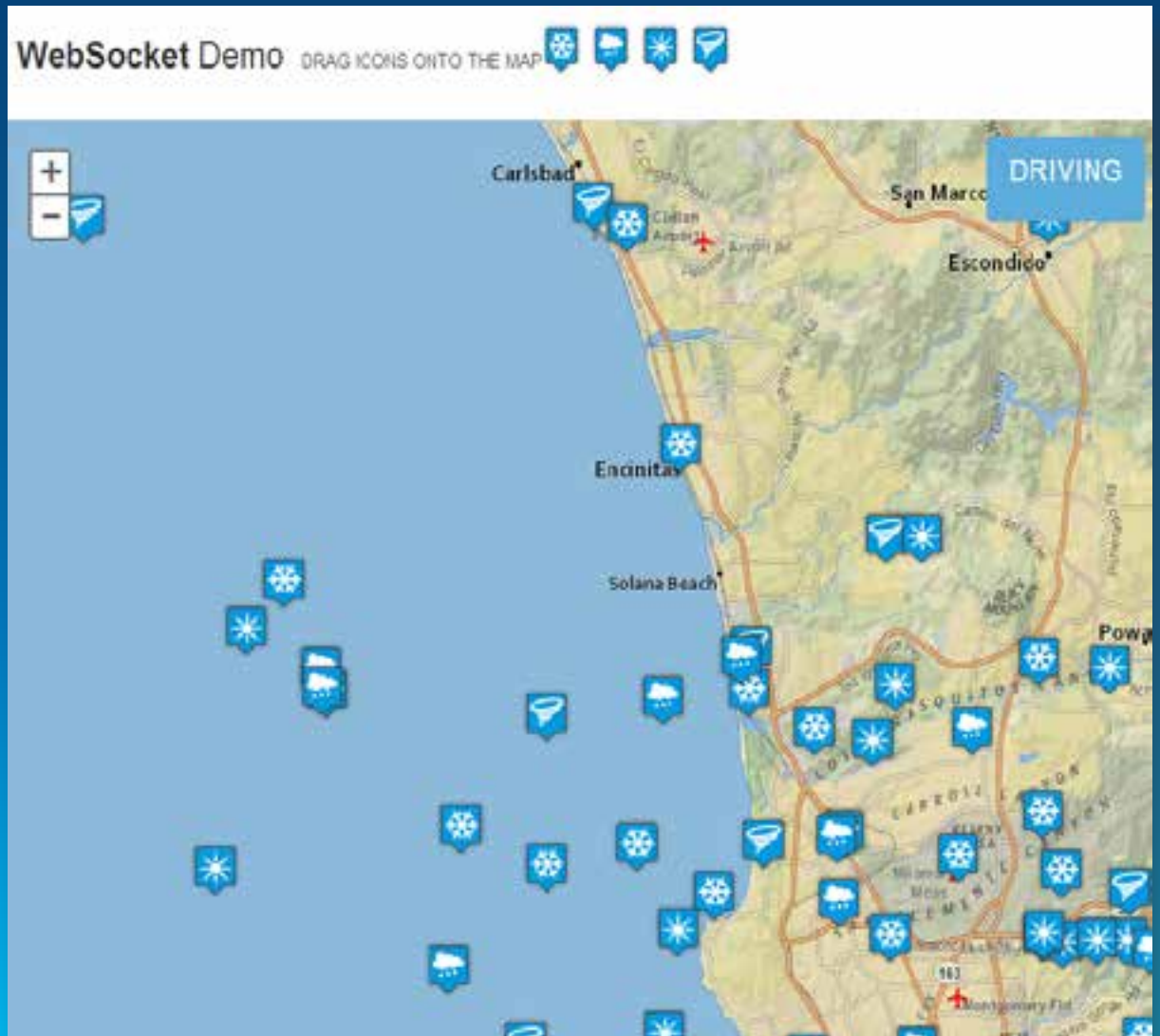




Layers

- Tiled Basemaps
  - ArcGIS.com / ArcGIS Server
  - Web Tiled Layer
- Graphics
- Feature Layer
- KML
- GeoRSS
- Dynamic Map Services / Image Services
- WMS / WMTS

Real-time Data & StreamLayer



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Better Vector Mapping

Proportional line symbols

Dot Density

Proportional point symbols

Symbol Rotation

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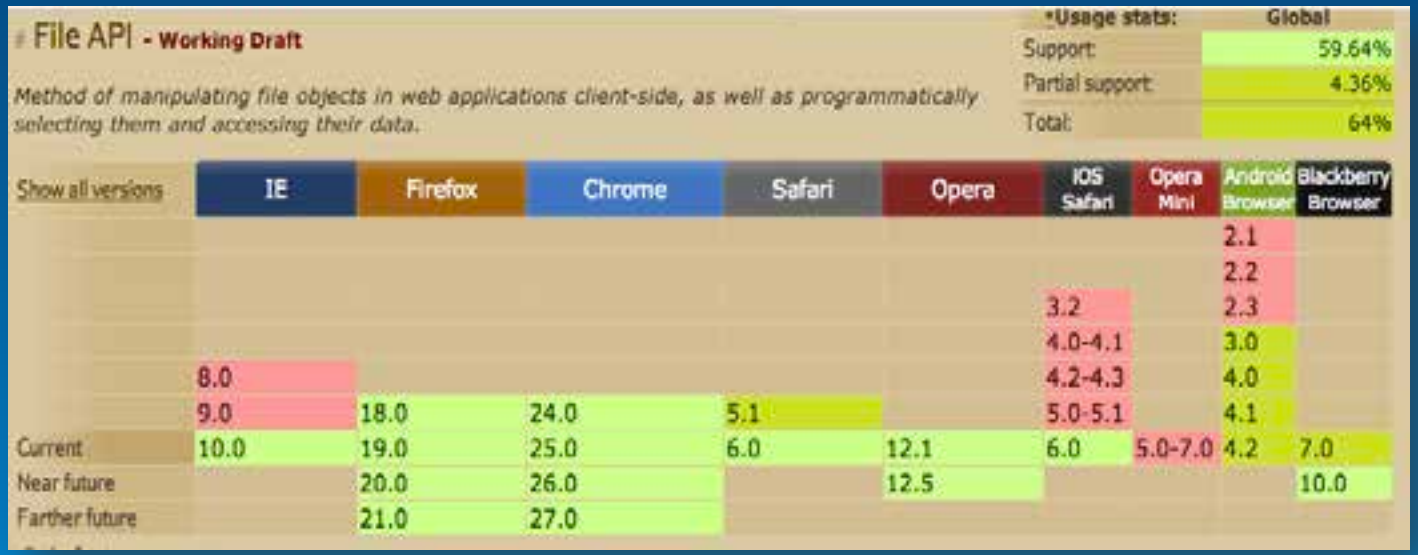
Evolution of HTML5

By Sergey Mavrody 2011 | CC Attribution-ShareAlike 3.0


File API - Working Draft
Method of manipulating file objects in web applications client-side, as well as programmatically selecting them and accessing their data.
*Usage stats:
Global
Support:
59.64%
Partial support:
4.36%
Total:
64%
Show all versions
IE
Firefox
Chrome
Safari
Opera
iOS Safari
Opera Mini
Android Browser
Blackberry Browser
2.1
2.2
3.2
2.3
4.0-4.1
3.0
8.0
4.2-4.3
4.0
9.0
18.0
24.0
5.1
5.0-5.1
4.1
Current
10.0
19.0
25.0
6.0
12.1
6.0
5.0-7.0
4.2
7.0
Near future
20.0
26.0
12.5
10.0
Farther future
21.0
27.0

Current Location
Directions to Here
Directions From Here

Drag and Drop Demo

Add File

Owner: Margorie J Thomas

Offline Storage – the Challenge

- What we want…
  - More storage
  - Persist on the client
  - Don’t transmit to the server
- Why?
  - Disconnected editing
  - Local Tiling
  - Save state
  - Performance – low bandwidth

Web Storage

- **Named key/value pairs**
- **Stored natively in browser**
- **Not transmitted to server**
- **All data serialized to strings**
- By default: 5 megabytes
- Be careful of race conditions!

HTML5 STORAGE SUPPORT

IE	FIREFOX	SAFARI	CHROME	OPERA	IPHONE	ANDROID
8.0+	3.5+	4.0+	4.0+	10.5+	2.0+	2.0+

IndexedDB

- **Good:**
  - **Fast indexing and searching**
  - **Works in asynchronous mode & has some transaction locking**
  - **50MB storage limit with FF, but can request more**

- **Bad:**
  - **Lack of browser support**
    - IDBWrapper can help with browser compatibility

WEB SQL DATABASE SUPPORT

IE	FIREFOX	SAFARI	CHROME	OPERA	IPHONE	ANDROID
10	5+		12+		3.0+	2.0+

Example: Offline Tiling

- Web Workers
- Use Web Storage for Tiles

- Coming soon… TPK
  - Using File API, BLOB API

Mobile Development

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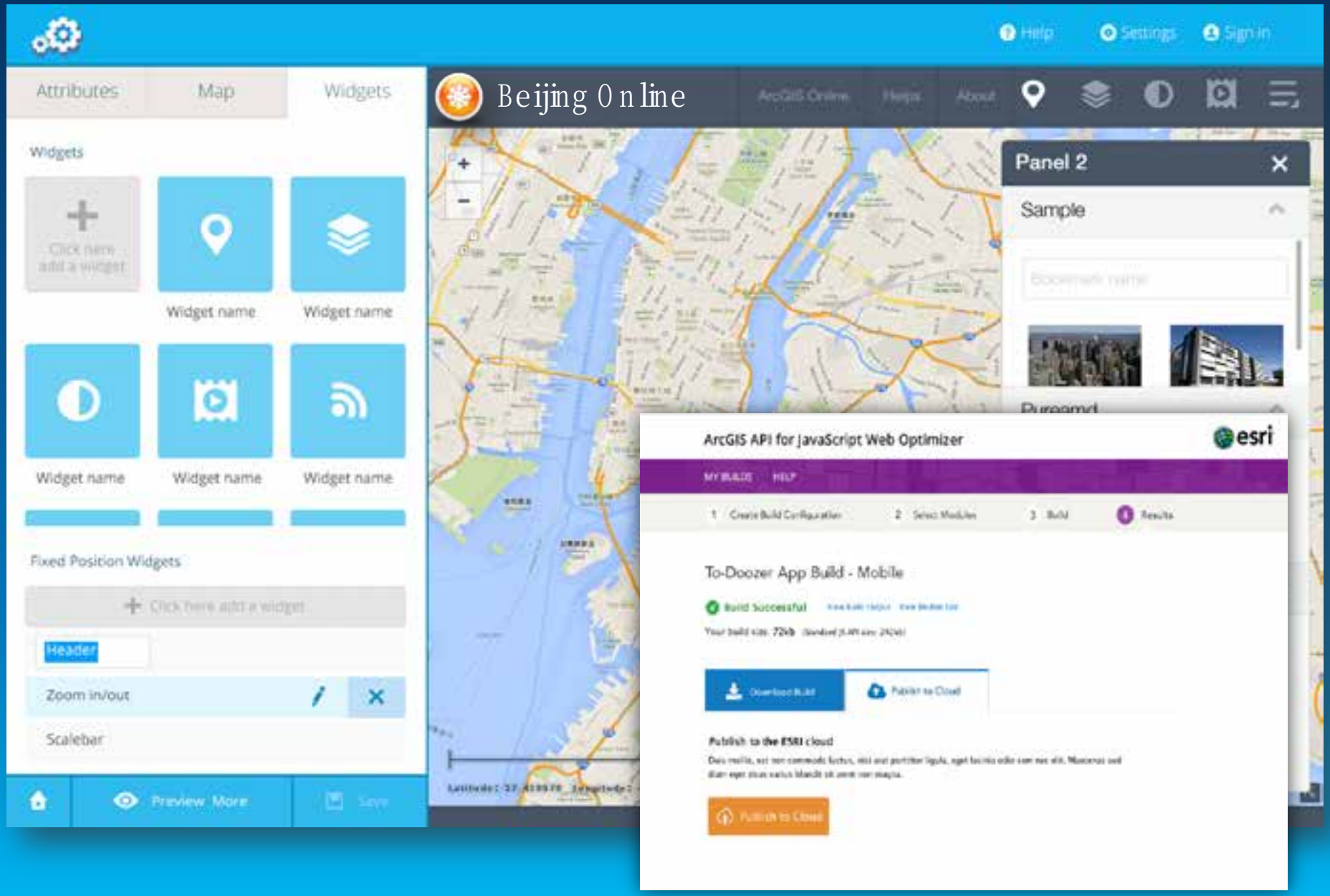
Sneak Preview… (no photos please J)


Help
Settings
Sign in
Attributes
Map
Widgets
Widgets
Widget name
Widget name
Widget name
Widget name
Widget name
Fixed Position Widgets
Header
Zoom in/out
Scalebar
Preview
More
Save
Beijing Online
ArcGIS Online
Help
About
Panel 2
Sample
ArcGIS API for JavaScript Web Optimizer
esri
To-Doozer App Build - Mobile
Build Successful
Publish to the ESRI cloud

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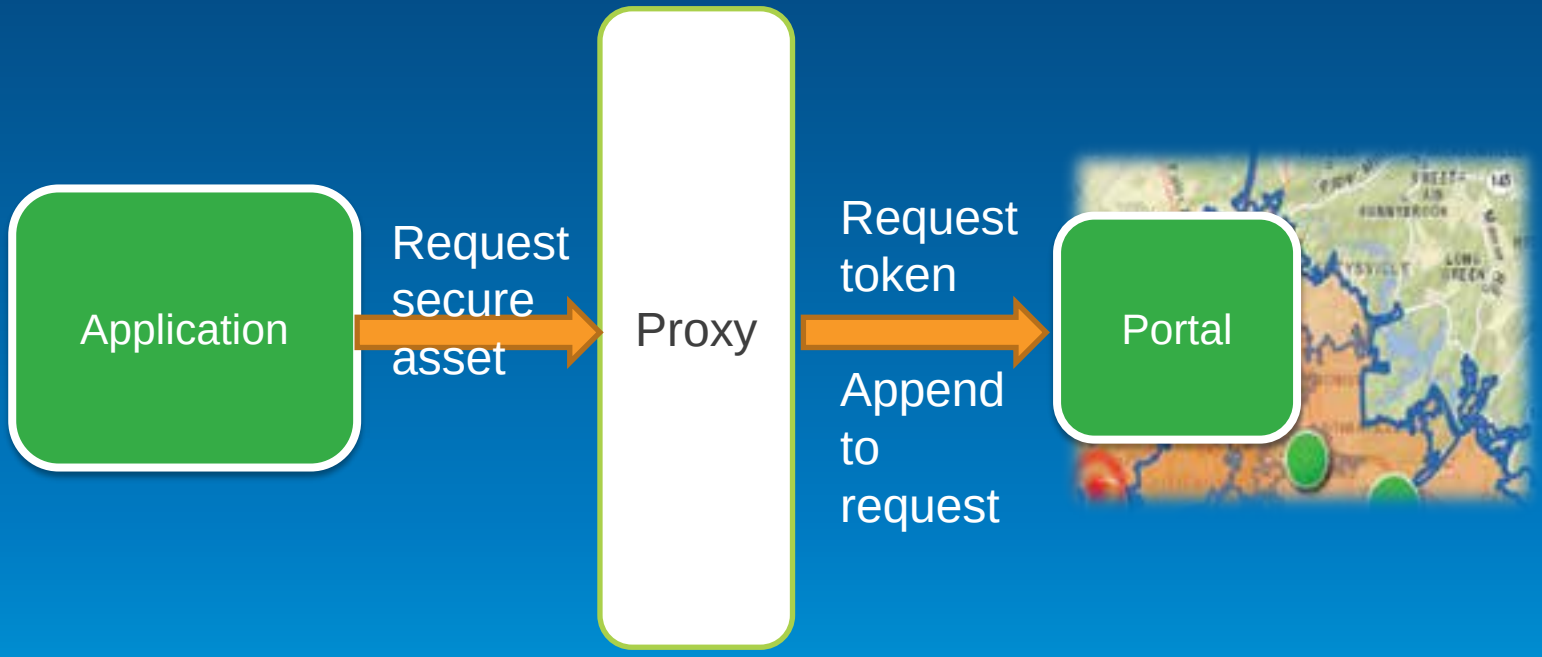
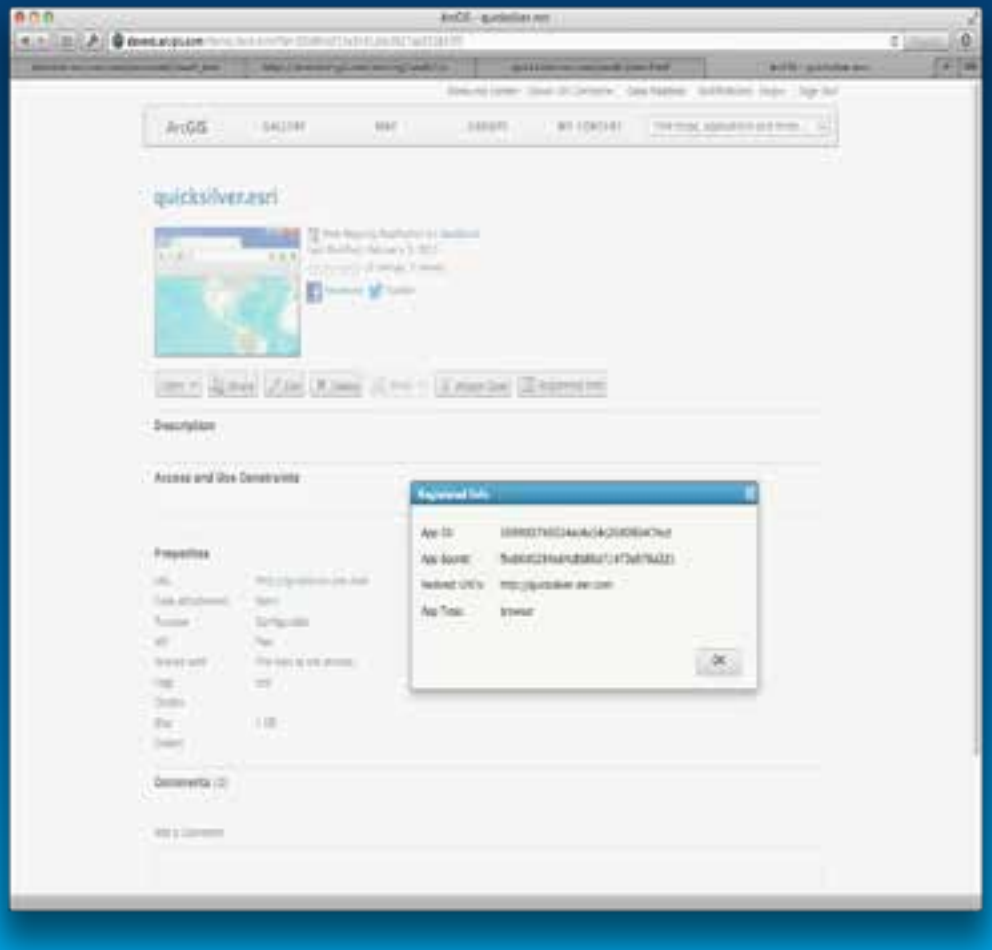
Identity Manager, or…

What if I don’t want users to have to sign in?



**Proxy will use an app user à “app secret”

App Registration



What does it do?

- Creates an item
- **AppID = client_id**
- App Secret
- Set **application name** (shown during login)
- Setup **allowed redirect URLs** (just domain name is ok).

What's the Point?

1. I can use my Online account for accessing secured assets (AGOL items, AGS services, etc).
2. Single sign-on (I only have to sign in once).
3. I can federate enterprise identities through Portal.
4. Needed for app marketplace

Code Management and Change Control

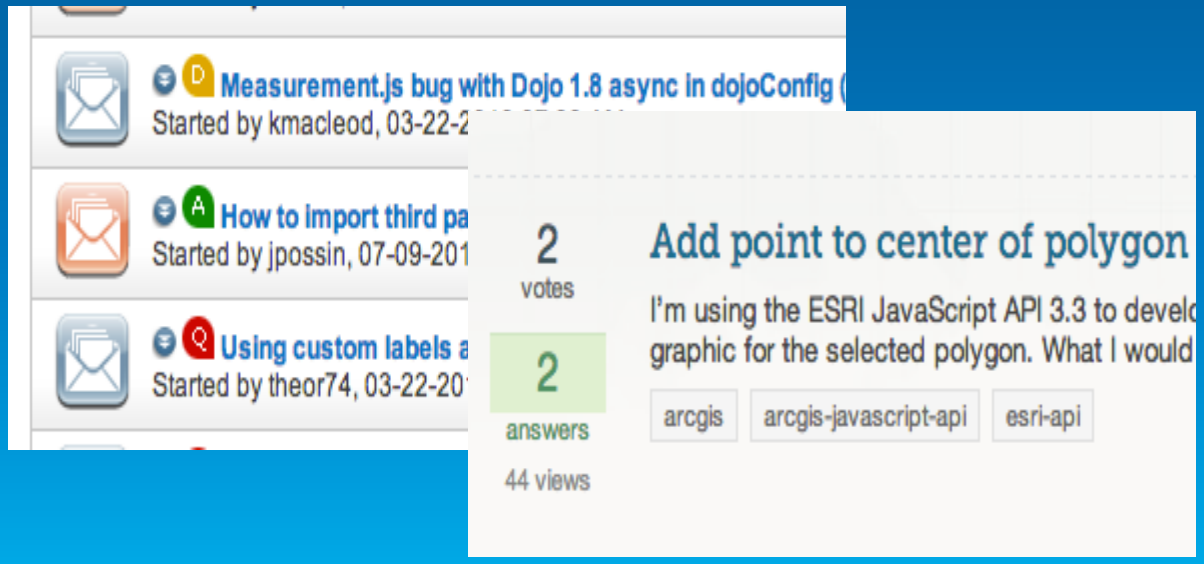
- In-house
  - Subversion
  - Master-slave based systems
- Cloud-based
  - Github
  - ?

Tips and Tricks

- Displaying lots of data – performance considerations
- Getting the map’s center/zoom level
- Sample Sandbox

Getting Help

- Community page in the API documentation
- Traditional forum
- GIS.StackExchange
- Twitter: API team is on twitter or use #esrijs



Thanks!

Jeff Archer
@vee_dubb

Julie Powell
@JuliePowellGIS

Understanding our world.