Working with Application Frameworks and ArcGIS API for JavaScript

Matt Driscoll (@driskull)
Derek Swingley (@derekswingley)

http://tinyurl.com/arcgismvcjs
JavaScript-based Application Frameworks

- MVC

- AngularJS

- Backbone.js

- Knockout.js
Why?

- Separation of concerns
- DRY
- Easy to test
- Fun (do more with less code)
First, we need an app...
function showPhotos(pics) {
    //console.log("show photos: ", globals.currentPicIndex, pics);
    domUtils.show(dom.byId("load-more"));
    var photoMarkup = [];
    array.forEach(pics, function(pic) {
        var picUrl = "http://farm" + pic.farm + ".static.flickr.com/" + pic.server + "/" + pic.id + "." + pic.isDefault ? "s" : "m" + "_" + pic.secret + ".jpg"
        var flickrUrl = "http://www.flickr.com/photos/" + pic.owner + "/" + pic.id + "/
        photoMarkup.push("<a href=" + flickrUrl + " target="blank">" + pic.license + " <br>
    });
    dom.byId("photo-list-info").innerHTML = "Found " + globals.currentPicIndex + " photos."
    dom.byId("photo-list").innerHTML += photoMarkup.join("<br>");
    if (globals.currentPicIndex + 3 < globals.currentPics.length) {
        dom.byId("load-more").innerHTML = "Load More";
    } else {
        domUtils.hide(dom.byId("load-more"));
    }
}
Backbone.js
Features

- Models
- Views
- Events
- Collections
- Routes
- History
• **Pros**
  - Wide adoption
  - Clear MVC implementation
  - Routers / History
  - Underscore Helper Functions

• **Cons**
  - Dependencies
    - $
    - _
Angular.js

HTML enhanced for web apps!

Why AngularJS?

HTML is great for sharing static documents, but if failures when we try to use it for declaring dynamic
views in web applications. AngularJS lets you extend HTML vocabulary for your application. The
resulting environment is extremely expressive, readable, and easy to develop.

Alternatives

Other frameworks deal with HTML by either abstracting away HTML, CSS, and/or
JavaScript or by providing an imperative way for manipulating the DOM. Neither of these address
the problem that HTML was not designed for
dynamic views.

Extensibility

AngularJS is a toolset for building the framework
most useful to your application development. It is
fully extensible and works well with other libraries.
Every feature can be modified or replaced to suit
your unique development workflow and business
needs. No limits to that cut here.
- Pros
  - Docs/Tutorials
  - Built-in AJAX / JSONP
  - Magic
  - Google

- Cons
  - Fuzzy MVC implementation
  - Non-standard markup (ng-*)
  - Magic
  - Google
Knockout.js
Features

- View-Models (MVVM Pattern)
- Observables
- Bindings
- Templates
• Pros
  - No dependencies
  - Uses AMD if define found
  - Good docs & examples

• Cons
  - No routes/history
  - HTML can become bloated with bindings

Knockout.
Matt Driscoll (@driskull)
Derek Swingley (@derekwingley)

http://tinyurl.com/arcgismvcjs

http://esriurl.com/survey

Thursday, March 28th – Offering ID: 394