

How to Impress Girls (or Boys) with HTML5 and AngularJS

DevNexus 2014

Code Samples Online

- Code Items available on GitHub:
 - [https://github.com/verlin-inbloom/
DevNexus-2014](https://github.com/verlin-inbloom/DevNexus-2014)



“**You’re not gonna amount ta
JACK SQUAT!**

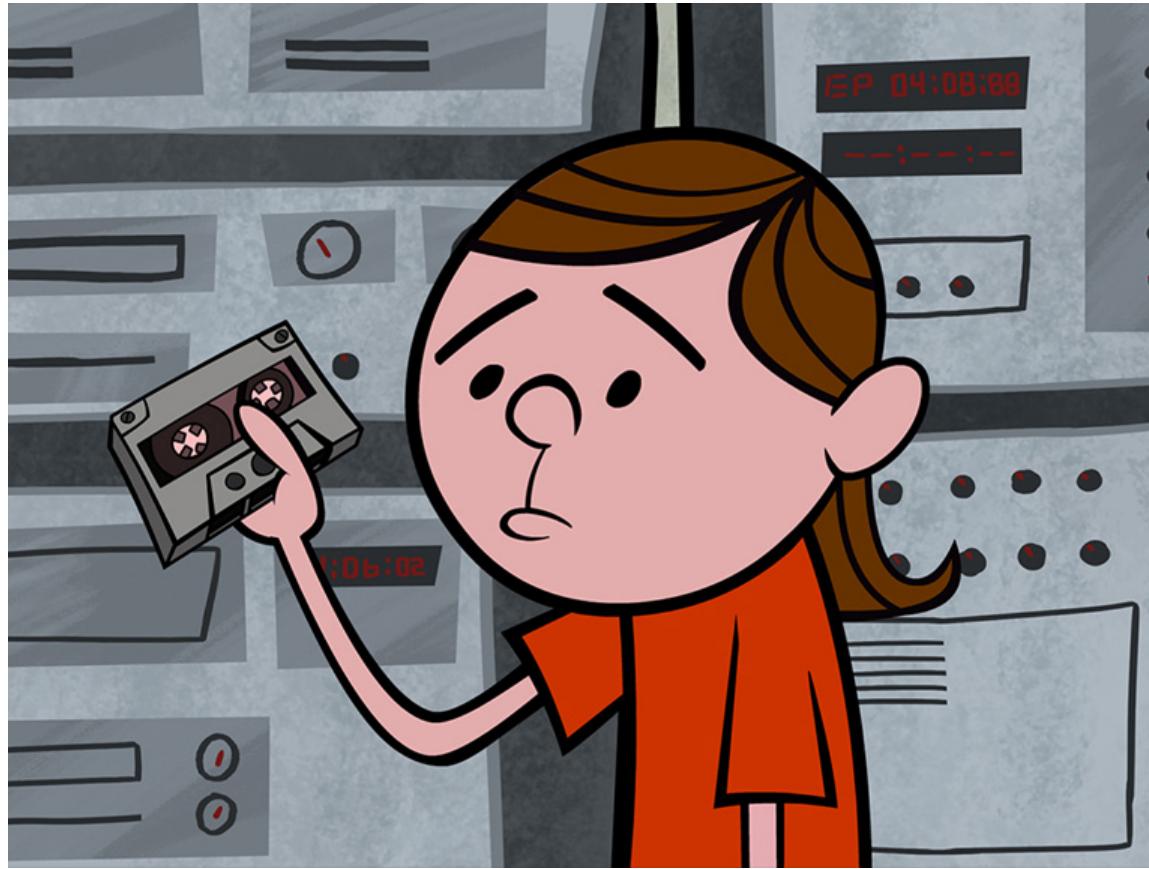
— Matt Foley

The Thinking Man’s Chris Farley

Now with a beard.

Works for dating as well as business.

FAIL FAST, THEN ITERATE.



“I made you a mix tape”

Late 1980s – mid 1990s



Taking it back

HTML 4.01 / Static Web Page

What's Wrong With This Picture?

- It's ugly.
 - We could fix that with CSS. But...
- It doesn't actually play the music!
 - Sure, we could fix that with Flash...
 - ...And forget about mobile.



“I made you a CD”

Late 1990s – 2003

I've seen the
FUTURE
It's in my
BROWSER



The future is 2006

HTML5 / Static Web Page

Make It Better With HTML5

- Add HTML5 elements for media playback
 - <video>, <audio>, <canvas>
 - Obviously, we're using <audio>
- We're already getting better, but this is still pretty lame...
 - Separate player for each file.
 - No easy way to move between tracks.
 - It's still ugly.



A first look at AngularJS

HTML5 / AngularJS View

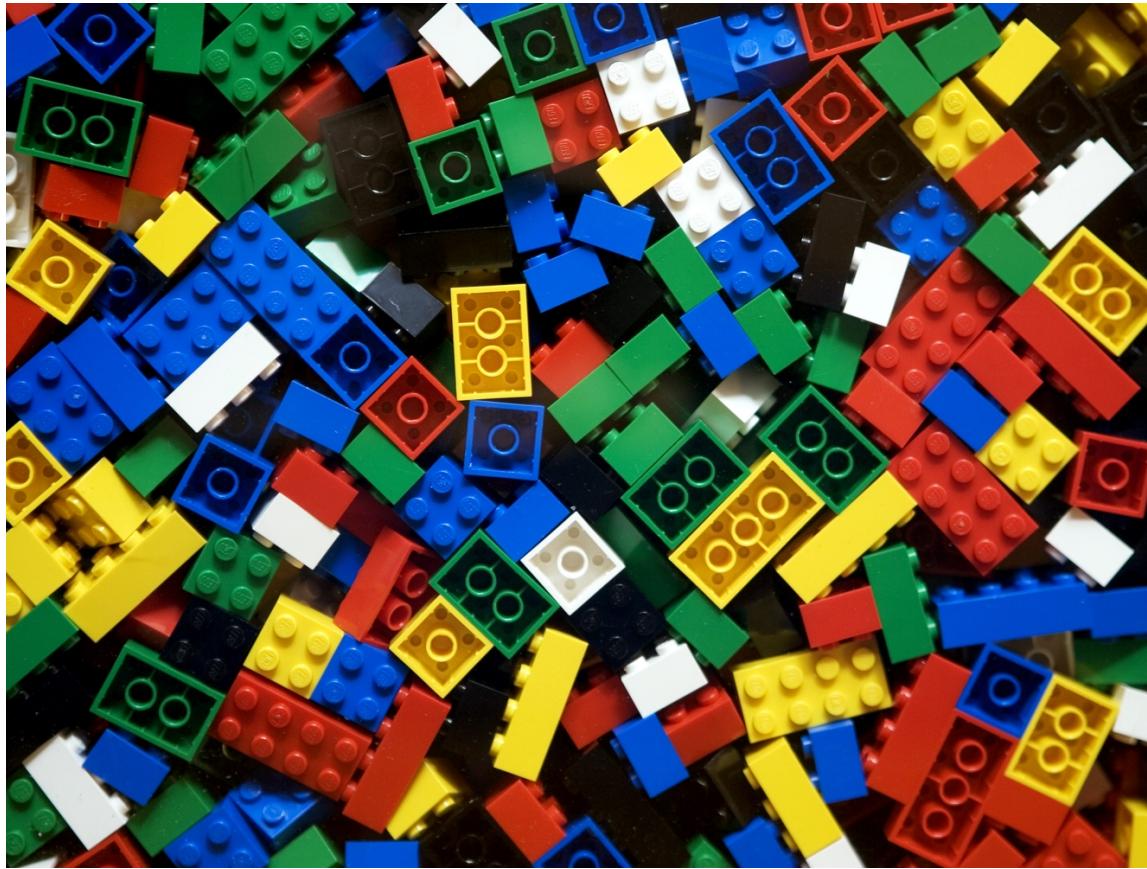
Look Ma! I'm CODING!

- Let's turn our static web page into a real application with AngularJS directives
 - `ng-app`
 - Flags the element containing an Angular application
 - Single page can contain multiple Angular applications!
 - `ng-repeat`
 - DRY out the code, less copypasta
 - Does not fix the multiple players issue, though.
- Data Binding
 - AngularJS features two-way data binding
 - If you change it in the view, it's changed in the model, and vice-versa.
 - We're hardcoding our data here, but it gets better...



“Um...I made you a web application?”

2012 – present



Everything is awesome!

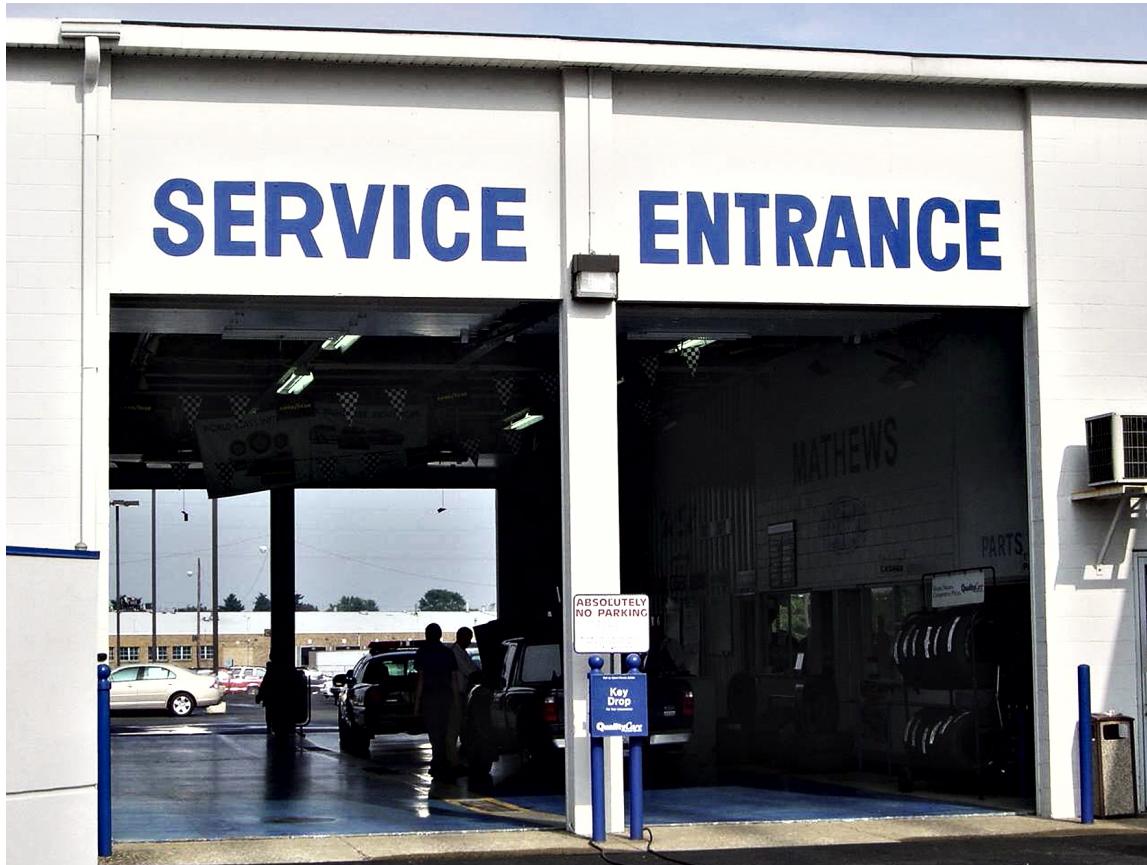
HTML5 / AngularJS View and Controller

Make Mine Modular

- We'll add a simple controller to provide the track listing to the view.
 - By doing this, we're separating our presentation from our data model and business logic.

Now What?

- It's still ugly, but we've laid a foundation here to get better quickly.
- The next order of business is to get rid of the multiple players!



Inject yourself before you wreck yourself

HTML5 / AngularJS View, Controller, and Services

Services in AngularJS

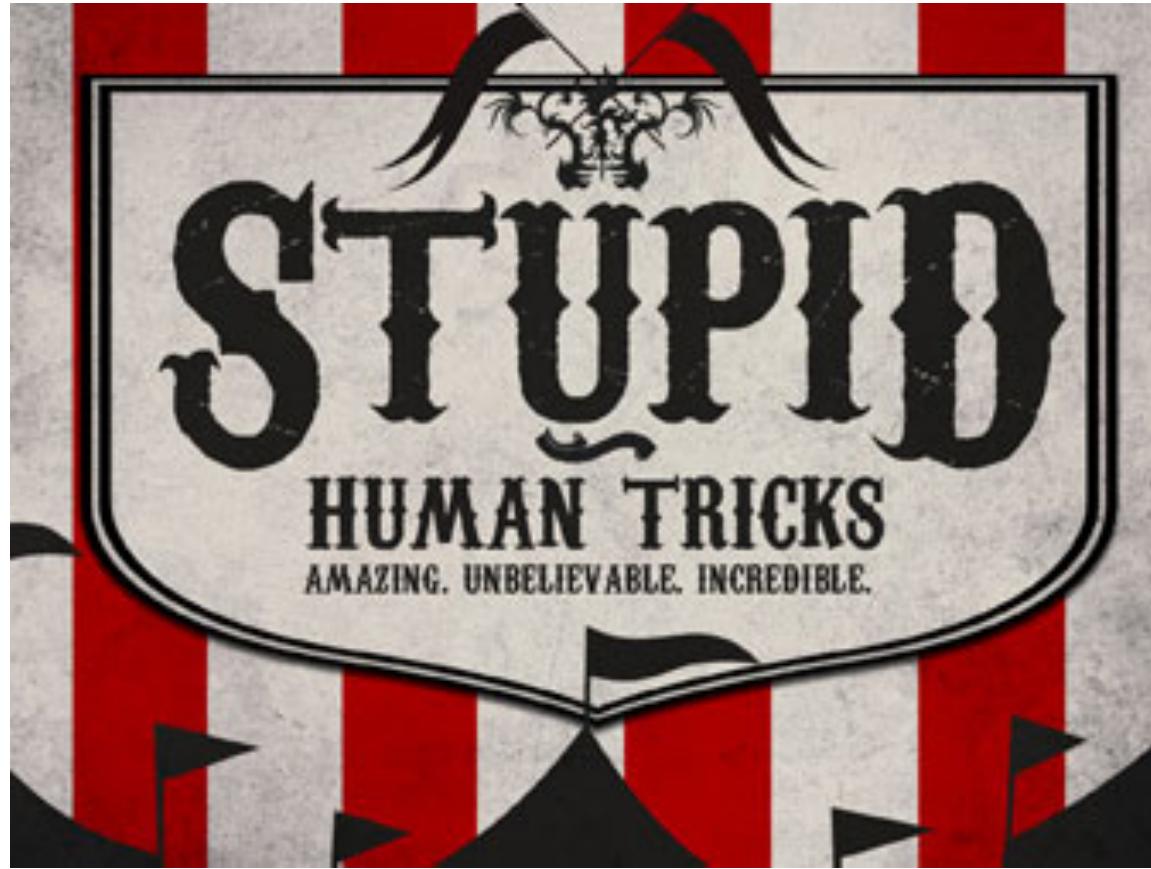
- Instead of building giant controllers, AngularJS allows you to build modular services and inject them into controllers.
- Of course, you can still build giant controllers if you want to.
- Don't do that.
- No, seriously, don't do that.

Adding Services

- We're going to add two services to our app
 - audio
 - Provides an invisible <audio> control with play and pause functions
 - We have to implement the player interface in the view!
 - tracklist
 - Provides files information about our playlist
 - Functions to return the current file and navigate forwards and backwards

Win Some, Lose Some

- We've cleaned up the view
 - Only one player on the page
 - Familiar media player look and feel
- But we lost some functionality, too
 - What happened to the default controls?
 - Did I mention the tracks are still hardcoded?



Not enough tags for you?

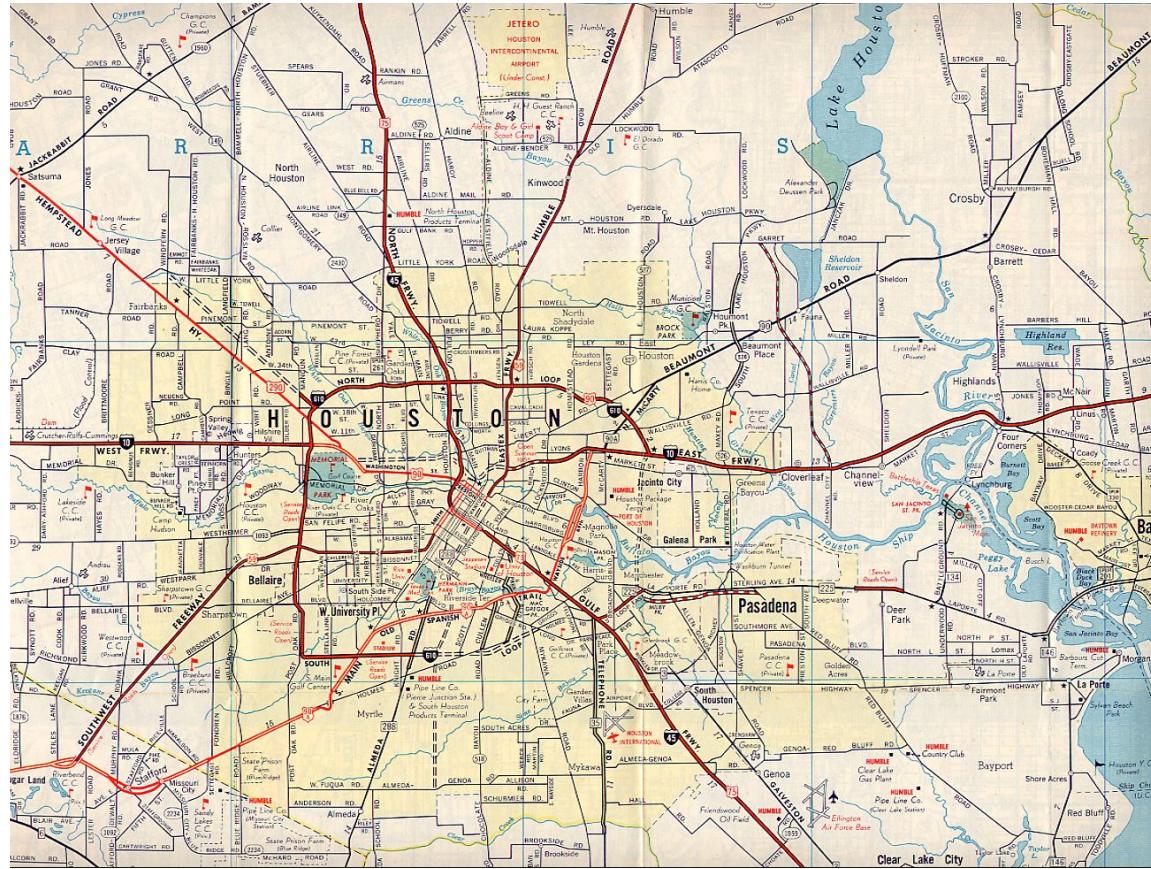
HTML5 / AngularJS View, Controller, Services and Directives

AngularJS Directives

- Sometimes, the HTML you already know isn't enough.
- Angular lets you create your own directives to do some heavy lifting.
- We're going to create a simple directive that just writes to the console log.

Some Notes on Directives

- The ‘restrict’ option specifies how the directive will be used
 - ‘A’ - Attribute
 - ‘E’ - Element
 - ‘C’ - Class
 - ‘M’ – Comment
- Use Element Directives with caution – older browsers will throw up!



Where are we? And where do we go from here?

Next Steps

What Did We Learn?

- We laughed, we cried, we wrote a tiny app.
- HTML5 <audio>
- AngularJS Views
- AngularJS Controllers
- AngularJS Services
- AngularJS Directives

What's Next?

- Wire up an HTTP backend
 - AngularJS supports GET, POST, and JSONP
 - Watch out for CORS
- Testing
 - Although I completely ignored it today, AngularJS provides great support for unit testing