



Put a little
Backbone in
your
WordPress



Put a little Backbone in your WordPress

- ➡ Backbone is Awesome
- ➡ Includes Underscore.js, also awesome
- ➡ WordPress makes Backbone easier
- ➡ Start using Backbone!

Backbone is Awesome

Philosophically, Backbone is an attempt to discover the minimal set of data-structuring (models and collections) and user interface (views and URLs) primitives that are generally useful when building web applications with JavaScript

What Is Backbone?

- Prototypes: Model, Collection, View

- Plus: Event, Router, History, Sync

- Getting Data:

 - Bootstrapping

 - AJAX/AJAJ

 - JSON REST API

Why use Backbone?

- ➡ Highly interactive pages - front end or admin
- ➡ Single page application with more than one state
- ➡ Helps keep your code maintainable
- ➡ Bundled with WordPress

Some Examples

- ➡ <http://backbonejs.org/#examples>
- ➡ Rdio, Hulu, Gawker, Foursquare, Disqus, Khan Academy, Basecamp, Stripe, AirBnB, Pandora, Code School, CloudApp, Trello and on and on...
- ➡ Backbone in core...

Backbone in WordPress Core

➡ media

➡ revisions

➡ themes

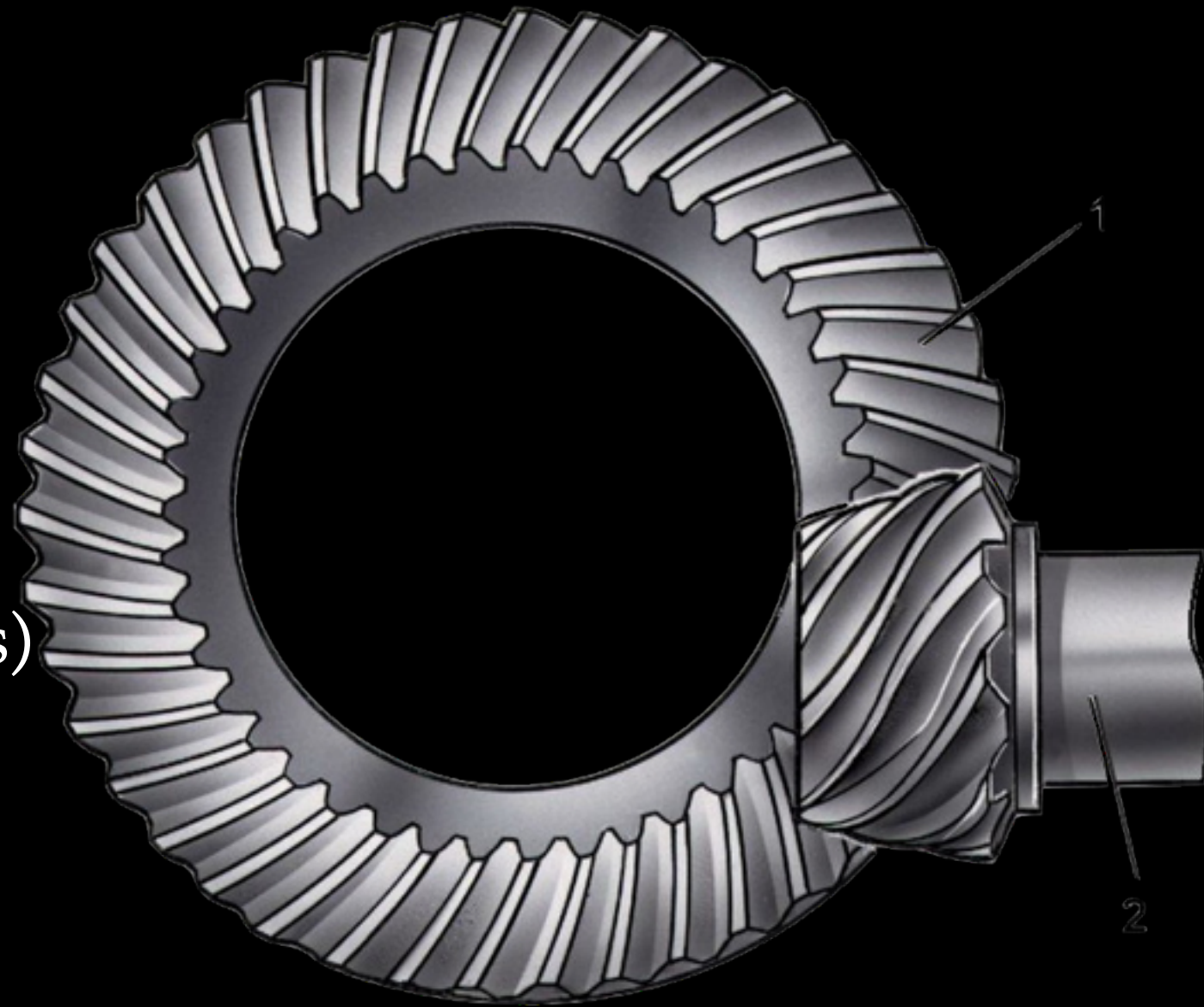
➡ customizer

Underscore is Awesome

- ➡ Collections: `_.map`, `_.where`, `_.pluck`, `_.filter`
- ➡ Functions: `_.memoize`, `_.throttle`, `_.debounce`, `_.once`, `_.delay`, `_.defer`
- ➡ Utility: `_.pick`, `_.extend`, `_.defaults`
- ➡ <http://underscorejs.org/>

WordPress and Backbone

- `wp_localize_script`
- `wp_ajax_(action)`
- `wp_create/verify_nonce`
- `wp_remote_get`
- `get/set_transient` (tlc transients)
- `wp_send_json_success/error`
- `wp.template`



Coding Backbone is fun!



Coding Backbone is fun!

- ➡ annotated source code

backbonejs.org/docs/backbone.html

- ➡ simple and extendable - meant to be flexible
- ➡ clean structure, templates, code data binding



Building a Demo App

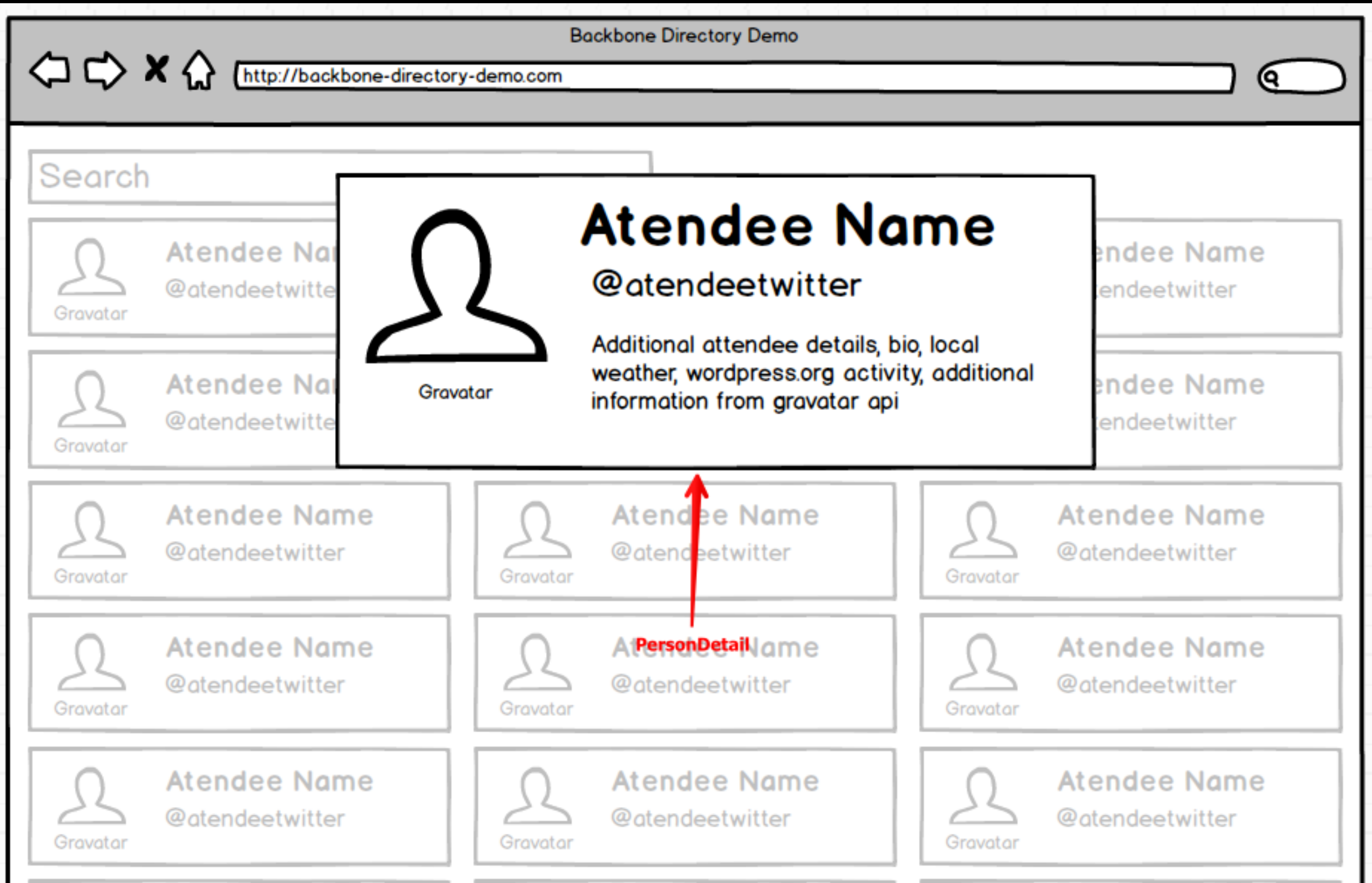
- ➡ Backbone driven plugin to display user directory
- ➡ Bootstrap data by scraping WordCamp attendee page
- ➡ TLC transient caching of fetched data

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<https://github.com/adamsilverstein/backbone-directory>

Mockup!



Demo

App Structure

➡ **Model:** Person

➡ **Collection:** PersonCollection

➡ **Views:** PersonDisplay, PersonDetail, Search Bar, Grid

➡ **Router:** routes: '?details=:name': , '?search=:search':

Code!

```
293
294 ▾ /* ROUTER */
295
296 ▾ /**
297  * Handle routing for the application
298  *
299  */
300 ▶ BackboneRouter = Backbone.Router.extend({
324  }),
325
326 ▶ /* APPLICATION */
395  });
396  })(jQuery);

181
182 ▾ /**
183  * The Search bar
184  */
185 ▶ BackboneSearchbar = Backbone.View.extend({
229  }),
230 ▾ /**
231  * The Grid view - displays the directory grid
232  */
233 ▶ BackboneGrid = wp.Backbone.View.extend({
292  },
293
```

Person Model

```
/* MODEL */

/**
 * The base person model
 */
var BackbonePerson = Backbone.Model.extend({

  initialize: function( singleData ) {

    if ( 'undefined' === typeof singleData ) {
      return;
    }

    this.set( {
      'name': singleData.name,
      'emailhash': singleData.emailhash,
      'twitterurl': singleData.twitterurl,
      'twittertxt': singleData.twittertxt,
      'atendeeUrl': singleData.atendeeUrl
    } );
  },
});
```


Person View

```
/**
 * The person display view - display the card of a single person
 */
BackbonePersonDisplay = wp.Backbone.View.extend({
  template: wp.template( 'backbone_person' ),
  el:       '#backbone_card',

  initialize: function() {
    this.listenTo( this.model, 'change', this.render );
  },

  render: function() {
    this.$el.html( this.template( this.model.attributes ) );
    return this;
  }
}),
```

Router

```
/* ROUTER */
```

```
/**
 * Handle routing for the application
 */
BackboneRouter = Backbone.Router.extend({

  routes: {
    '?details=:name': 'openbackbonePerson',
    '?search=:search': 'performSearch'
  },

  baseURL: function() {
    return window.location.pathname;
  },

  openbackbonePerson: function( name ) {
    console.log( 'route: ' + name + ' ' );
    // find the model

    var theModel = BackboneDirectoryApp.backbonePeople.where({ 'name': name });

    BackboneDirectoryApp.backbonePersonDisp.model.set( theModel[0].attributes );
  },

  performSearch: function( s ) {
    console.log( 'Router::performSearch' );
    $( 'input#backbone_person-search-field' ).val( s ).trigger( 'keypress' ).select();
  }

}),
```

PHP

```
add_shortcode( 'backbone_directory', 'displaybackbone_directory' );
```

```
function displaybackbone_directory(){
    if ( is_admin() ){
        return;
    }
    // Enqueue plugin JavaScript
    wp_enqueue_script( 'backbone_directory', backbone_DIRECTORY_URL . 'assets/js/src/
        backbone_directory.js', array( 'wp-backbone', 'hoverIntent' ), '1.0.0', true );

    // Enqueue plugin css & Dashicons
    wp_enqueue_style( 'styles', backbone_DIRECTORY_URL . 'assets/css/directory.css' );
    wp_enqueue_style( 'dashicons' );

    $cached_transient_key = 'backbone_directory_directory_data_b_' .
        backbone_TRANSIENT_HASH;

    // Use tlc transients to get the last cached data
    $directory_html = tlc_transient( $cached_transient_key )
        ->updates_with( 'bd_get_directory_html' )
        ->expires_in( DAY_IN_SECONDS )
        ->get();

    wp_localize_script( 'backbone_directory', 'directoryPageHTML', $directory_html );

    /**
     * Fetch the remote directory page
     */
    function bd_get_directory_html() {
        error_log( 'bd_get_directory_html' );
        $directory_remote_url = 'http://2014.nyc.wordcamp.org/attendees/';
        $attendee_page_html = wp_remote_retrieve_body( wp_remote_get( $directory_remote_url
            ) );
        return $attendee_page_html;
    }
}
```


HTML

```
<script id="tmpl-backbone_person" type="text/html">
  <div class="backbone_person-card" tabindex=0>
    <div class="backbone_person-gravatar">
      
    </div>
    <div class="backbone_person-name">
      <span>{{ data.name }}</span>
    </div>
    <div class="backbone_person-twittertxt">
      <span>{{ data.twittertxt }}</span>
    </div>
  </div>
</script>

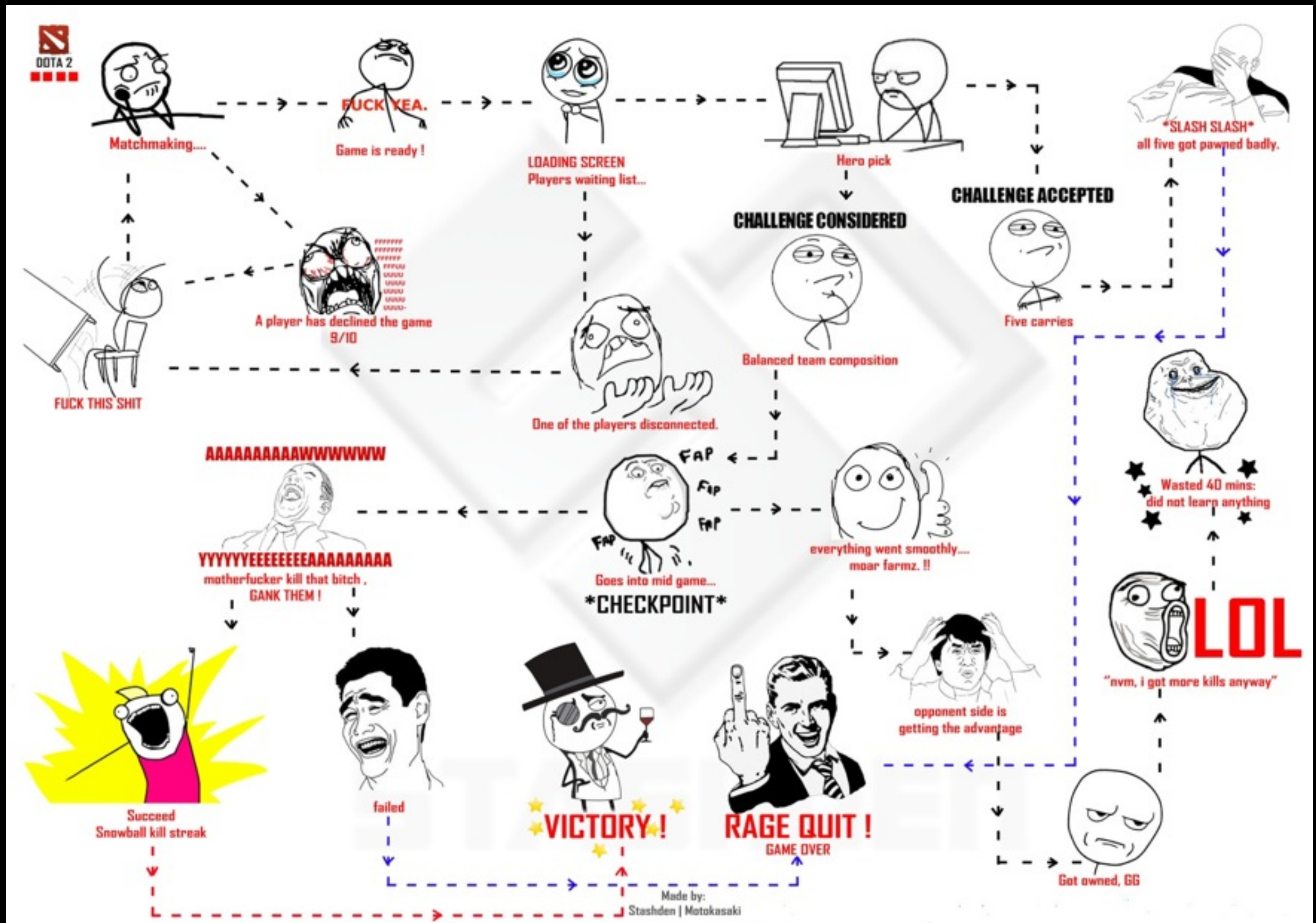
<script id="tmpl-backbone_person-search" type="text/html">
<# console.log( 'model::' + this ); #>
  <input id="backbone_person-search-field" type="text" placeholder="Search"
    value="{{ data }}">
</script>
```


Start Using Backbone

- ➡ Wireframes
- ➡ Models, collections
- ➡ Views: templates/rendering
- ➡ Data: bootstrap data, new data, updates
- ➡ Events - 'coming soon' to core
- ➡ Routing, History



Should You Use Backbone?



Resources

- Backbone - <http://backbonejs.org/>
- Underscore - <http://underscorejs.org/>
- Code School Backbone course - <https://www.codeschool.com/paths/javascript#backbone-js>
- Developing Backbone Applications - <https://www.codeschool.com/paths/javascript#backbone-js>
- JSON REST API - <https://wordpress.org/plugins/json-rest-api/>
- TLC Transients - github.com/markjaquith/WP-TLC-Transients



About

- Save assembly code onto cassettes
- Good at JavaScript & bug squashing
- Love contributing to WordPress Core
- Revisions Component Maintainer
- Senior Web Engineer at 10up

