

A dark, action-packed scene featuring a T-Rex with a soldier on its back. The soldier is wearing a helmet and holding a large, futuristic weapon. The T-Rex is roaring, and there is a bright explosion or fire on its back. The background is dark and smoky, with some debris floating in the air.

Webpack and Rails

a story of two asset pipelines

Vadim Brodsky and Regan Chan

Why, What, How... Should?



webpack



Webpack is Coming

- Rails 5.1 ships with Yarn and Webpack
- rails new myapp --webpack=react



DHH ✓
@dhh

Follow

Rails 5.1 will ship with Yarn to manage JS dependencies and --webpack to compile app-like JS via Webpacker:



rails/webpacker

webpacker - Use Webpack to manage app-like JavaScript modules in Rails

github.com

8:30 AM - 12 Dec 2016

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18

400

517



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Replying to @dhh

We will continue to use the asset pipeline for JavaScript sprinkles, CSS, images, and other static stuff. The two approaches coexist great.

2

19

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But I have Sprockets...

- Asset pipeline was introduced in Rails 3.1, part of Rails' "fast by default" strategy as outlined by DHH in his keynote at RailsConf 2011
- No configuration needed*
- Concatenate and minify JavaScript and CSS assets
- Transpilation of Sass, CoffeeScript, ERB
- Asset fingerprinting for production
- Dependency management with Gems



JavaScript Sprinkles



Thijs @thijs · 12 Dec 2016

Replying to @dhh

What is a “sprinkle”?



DHH ✓ @dhh · 12 Dec 2016

Behavior that decorates/augments an existing HTML document. Best understood in opposition to SPA. Basecamp 3 is mostly sprinkles.





```
//= require jquery
//= require jquery_ujs
//= require_tree ./lib/jquery
//= require ./lib/underscore/index
//= require ga_events.js
//= require bootstrap
//= require ./lib/bootstrap/bootstrap-switch
//= require bootstrap-select
//= require moment
//= require moment-round
//= require moment-duration-format
//= require ./lib/moment/moment.relativetimes
//= require modulejs
//= require scotch-panels
//= require typeahead.js/dist/typeahead.bundle.js
//= require_tree ./lib/fineuploader
//= require_tree ./lib/colorpicker
//= require_tree ./lib/nouislider
//= require highcharts
//= require_tree ./lib/isotope
//= require_tree ./lib/slick
//= require modernizr/modernizr
//= require_tree ./lib/vidyard
//= require_tree ./lib/filesaver
```



```
//= require matchMedia/matchMedia
//= require chartist/dist/chartist
//= require ./lib/minefield/minefield
//= require bootstrap-daterangepicker
//= require ./lib/html5sortable/html.sortable
//= require ./lib/blob/canvas-to-blob
//= require ./lib/utility/detect-os
//= require ./lib/utility/detect-mobile-browser
//= require ./lib/utility/json2
//= require ./lib/colourbrightness/colour-brightness
//= require ./lib/vidyard/save.popup.1.0
//= require ./lib/vidyard/uploader
//= require_directory ./lib/bootbox
//= require_directory ./lib/video-js
//= require_directory ./lib/video-js/lang
//= require_directory ./lib/video-js/vidyard_customizations
//= require constants
//= require vidyard_helpers
//= require underscore_template_settings
//= require_tree ./views/help_popover
//= require_tree ./views/tags
//= require_tree ./views/uploader_widgets
//= require bowser
```

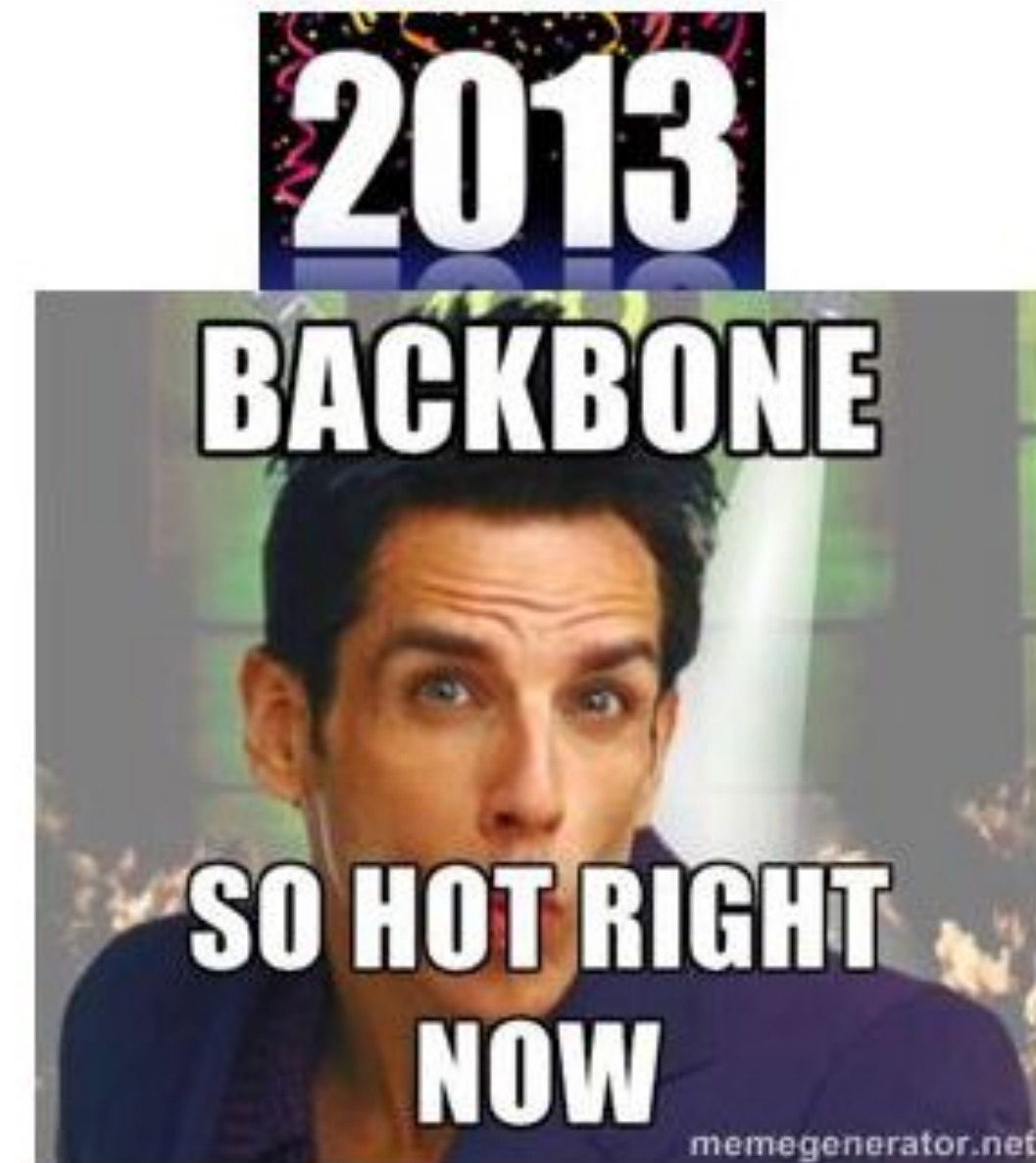

Meanwhile in JavaScript land

- Modules - CommonJS, ES Modules
- Dependency management - NPM, Yarn
- New language features - ES20XX
- Code linting - ESLint
- Code formatting - Prettier
- Static analysis - TypeScript, Flow
- Testing - Jest, Mocha, Puppeteer
- Performance - Uglify, TreeShaking, Code Splitting



Atwood's Law

Any application that *can* be written in JavaScript, *will* eventually be written in JavaScript.





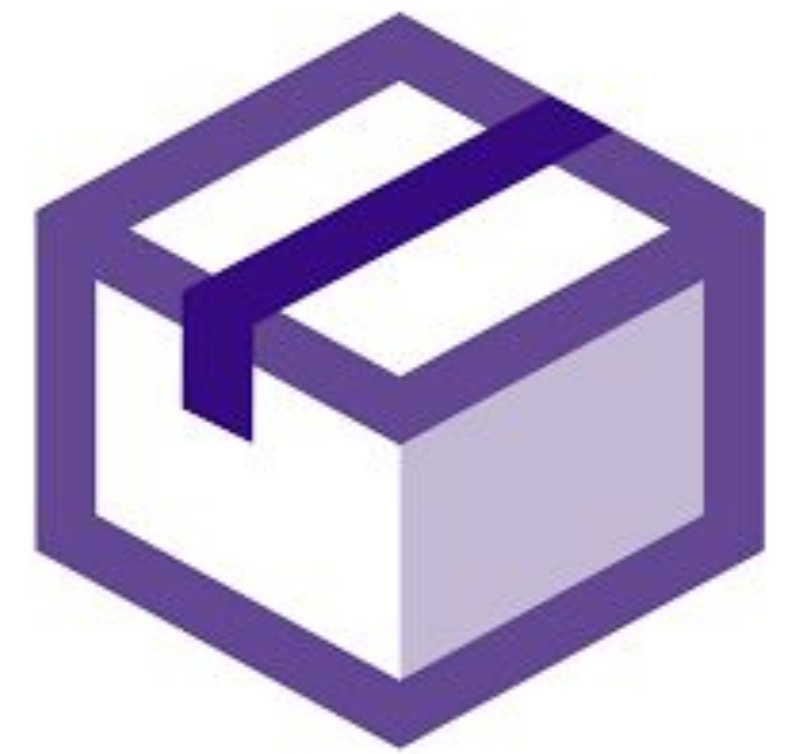
DAYS

**SINCE LAST NEW
JAVASCRIPT FRAMEWORK**

**WITH GREAT POWER COMES GREAT
RESPONSIBILITY**

...AND HEADACHES

memegenerator.net



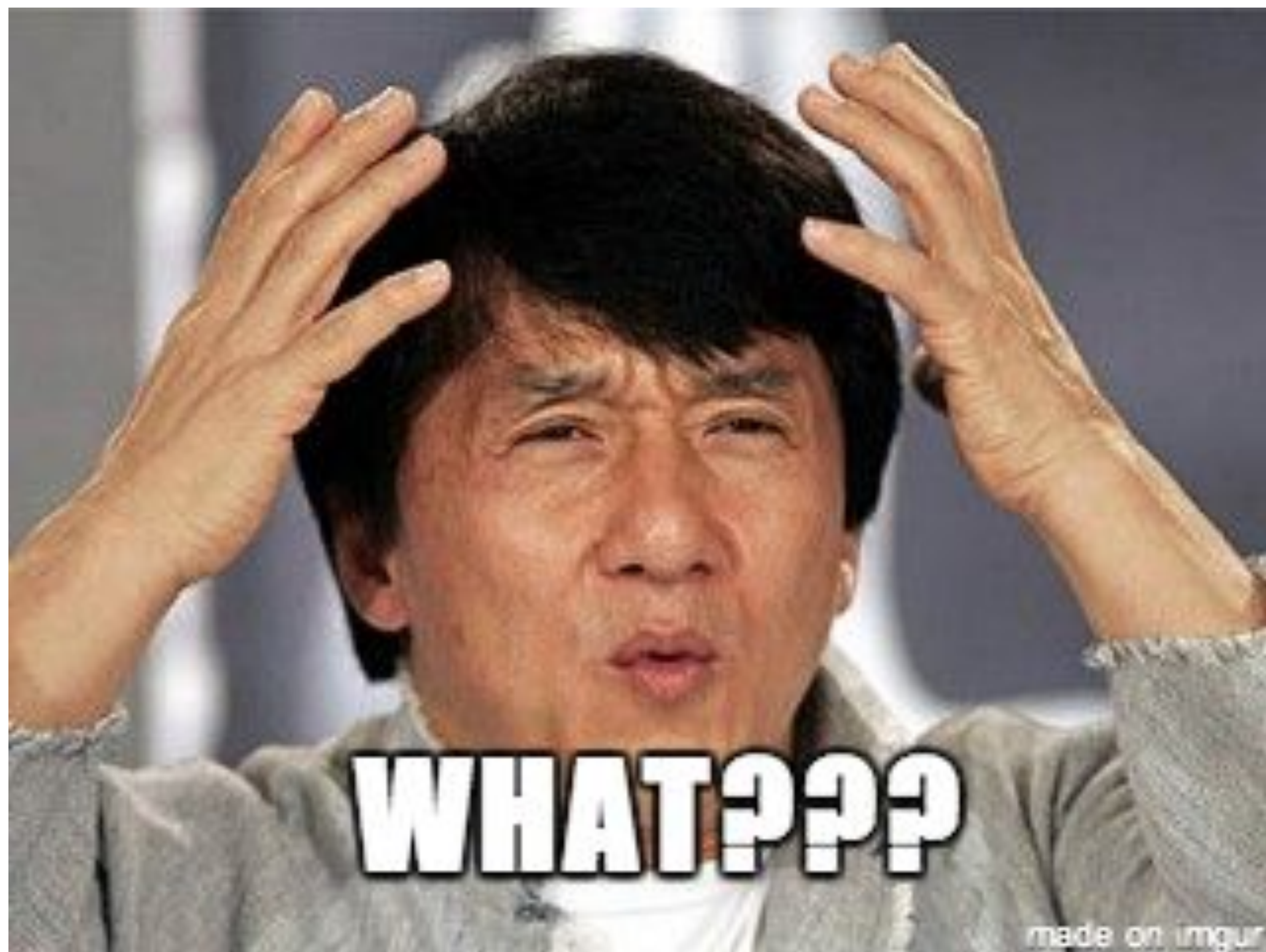
“

A bundler for javascript and friends. Packs many modules into a few bundled assets. Code Splitting allows to load parts for the application on demand. Through "loaders," modules can be CommonJs, AMD, ES6 modules, CSS, Images, JSON, Coffeescript, LESS, ... and your custom stuff.

”

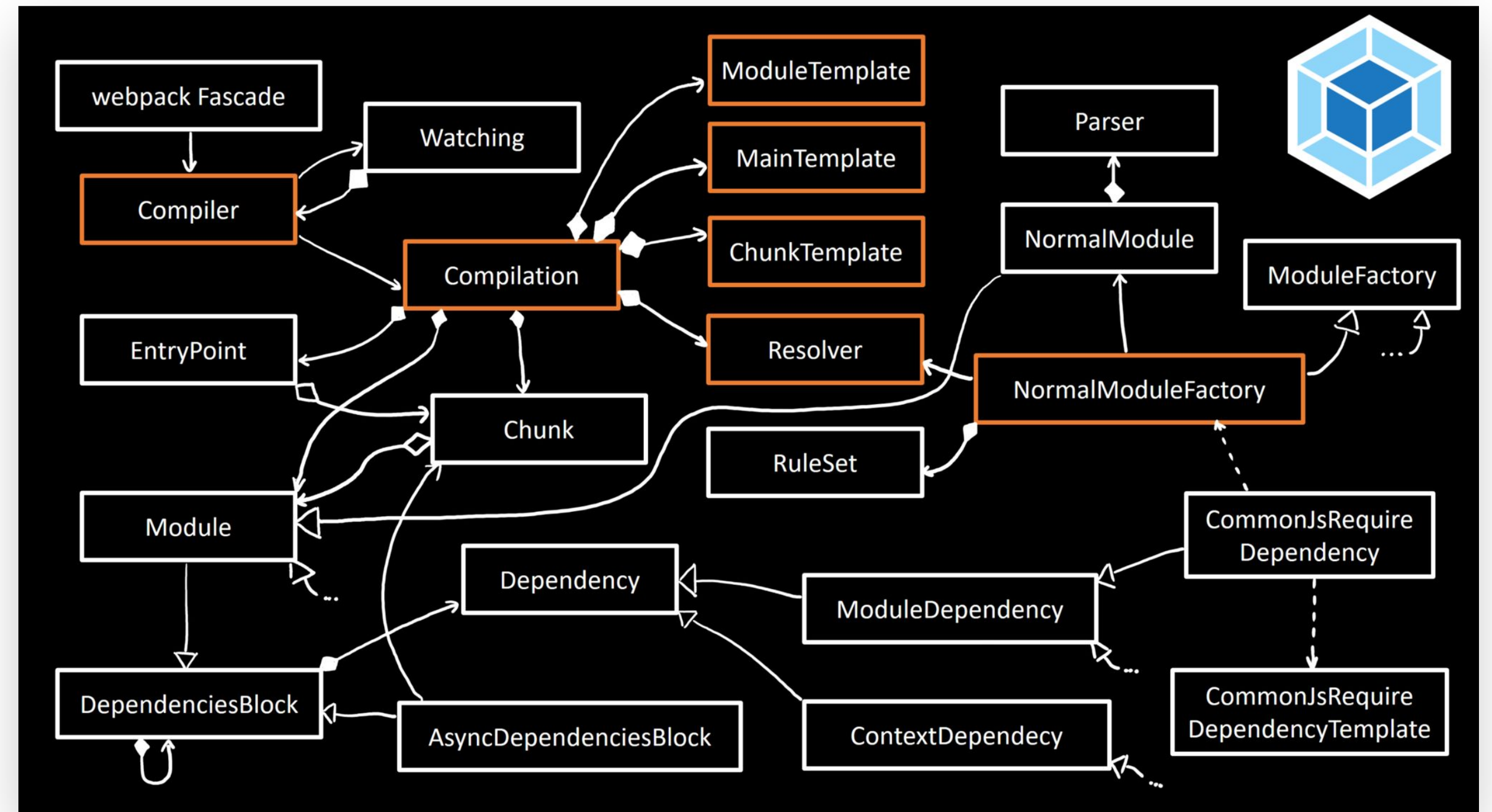


webpack



What is Webpack?

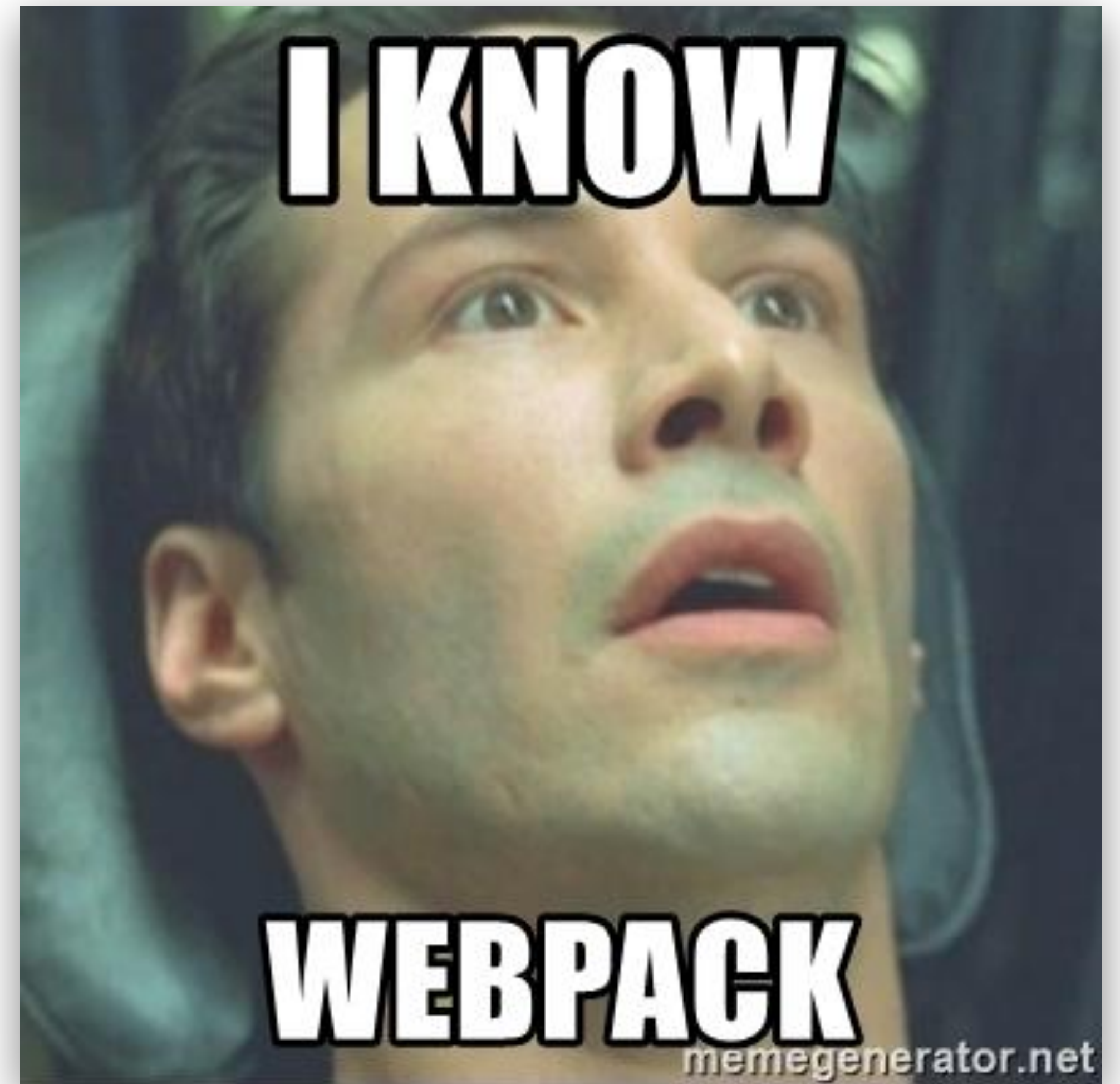
- Module bundler, import / load all the things
- Dependency graph
- Code processor, define output, transpiled, minified, fingerprinted
- Code splitting and lazy loading
- Incredibly configurable
- Dev Server*



As you can see from this figure, webpack is really simple, said nobody ever.

What is Webpack?

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What is Webpack

- Ruby Gem, comes with Rails 5.1+
- Pre-configured Webpack for dev, test, prod
ES6 with Babel, Sass, PostCSS
- Rails view helpers
- React, Angular, Elm, Vue generators
- webpack-dev-server
- No mention of it on Rails Guides?
- More in the *demo*



```
# Available Rails 5.1+
rails new myapp --webpack

app/javascript:
├── packs:
│   └── # only webpack entry files here
│       ├── application.js
├── src:
│   └── application.css
└── images:
    └── logo.svg
```




DHH ✓
@dhh

Following



We will continue to use the asset pipeline for JavaScript sprinkles, CSS, images, and other static stuff. The two approaches coexist great.

10:33 AM - 12 Dec 2016

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Demo

Should you use Webpack?

- Yes
- Do you use JavaScript in your Rails App?
- If you foresee building a Rich™ user interface
- If you prefer to manage front end dependencies via Yarn / NPM
- Hard dependency on Node.js, Yarn
- Can be challenging to upgrade large legacy applications, like we did
- DHH does, integrates with Stimulus
- Webpack 4 is bringing cool new shiny things



“That’s all Folks!”

Questions?