



Polymer

Una bella historia de amor



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Google Developer Group organizer

Mejor tarde que nunca



Addy Osmani

Sunday, 19 January 2014

Front-end Choice Paralysis

A problem we regularly face in this industry is an abundance of choice. We have a plethora of tools, frameworks, languages, abstractions and platforms. Choice is ultimately good for competition and innovation, however when faced with too many choices, we can feel paralysis. Rather than making a choice we feel frozen and alone with the indecision of having too many options in front of us. This isn't necessarily an industry problem — it's a human problem.

Take the simple idea of streaming a movie on Netflix.

Over the weekend, I was determined to watch a movie on it. I'd set aside two hours, which I thought was sufficient to select and play something.

angular.js
Término de búsqueda

react.js
Término de búsqueda

ember.js
Término de búsqueda

vue.js
Término de búsqueda

knockout.js
Término de búsqueda

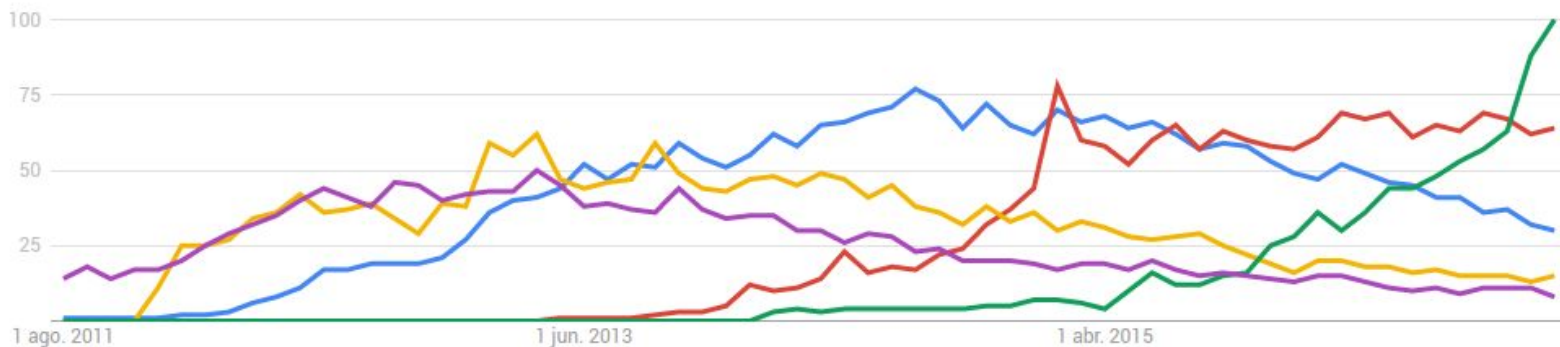
Todo el mundo ▾

14/7/11 - 20/11/16 ▾

Todas las categorías ▾

Búsqueda web ▾

Interés a lo largo del tiempo ?



This time you have definitely chosen the right libraries and build tools



Real World

Rewriting Your Front End Every Six Weeks

○ RLY?

@ThePracticalDev

Looking for love in all the wrong frameworks



Hype Driven Development

Life on the Bandwagon

○ RLY?

@ThePracticalDev



Web Components are low-level
primitives that let *you* define
your own HTML Elements.

Template

native client-side templating

Shadow DOM

scoping, composition

Custom Elements

define new HTML/DOM

HTML Imports

loading web components

Primitives are designed so we can
build **libraries on top of them.**

So what is Polymer?

**Polymer is not
a framework**



The diagram illustrates the layers of web architecture. It consists of four horizontal layers. The top layer, labeled 'Applications', is composed of eight teal-colored rounded rectangles. The second layer, labeled 'Existing Frameworks', is a single wide teal rounded rectangle. The third layer, labeled 'Web Components built with Polymer (or not)', is composed of eight magenta-colored rounded rectangles. The bottom layer, labeled 'Web Platform', is a single wide teal rounded rectangle. The labels are centered within their respective layers.

Applications

Existing Frameworks

Web Components built with Polymer (or not)

Web Platform

**Polymer is not
a framework
Sure?**

A white line graph on a black background. The line starts at a low point on the left, rises gradually with some minor fluctuations, and then curves sharply upwards towards the top right corner, indicating exponential growth or a significant increase in the final phase.

Over 3M pages



Ok Google, play music

Free, curated radio for what you're doing, how you feel, or what you want to hear.

LISTEN NOW



JOIN IN AND LEVEL UP

SUMMER 2015



Be one of the first to know when
YouTube Gaming goes live.

GET NOTIFIED

[LEARN MORE](#)



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ENGLISH › SPANISH

GALICIAN › ENGLISH

SPANISH › ENGLISH



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SHARE



VALIDATE

Your help will enhance translations for millions of users.

MY BADGES



MY STATS

0 ENGLISH › GALICIAN



00 37







Polymer-CLI

The multi-tool for Polymer projects

Usage: ``polymer <command> [options ...]``

Available Commands

build	Builds an application-style project
help	Shows this help message, or help for a specific command
init	Initializes a Polymer project
lint	Lints the project
serve	Runs the polyserve development server
test	Runs web-component-tester

Global Options

--env	The environment to use to specialize certain commands, like build
--entrypoint	The main HTML file that will be requested for all routes.
--shell <u>string</u>	The app shell HTML import
--fragment <u>string</u>[]	HTML imports that are loaded on-demand.
--root <u>string</u>	The directory in which to find sources and place build. Defaults to current working directory
-v, --verbose	turn on debugging output
-h, --help	print out helpful usage information
-q, --quiet	silence output

Run ``polymer help <command>`` for help with a specific command.

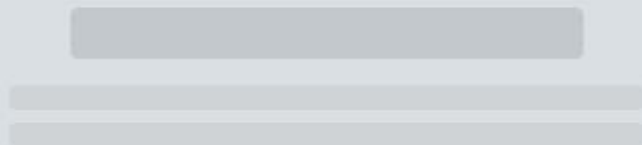


Let's build
an element!



http://www.webaddress.com

Hey user! Something **awesome** happened!



http://www.webaddress.com

Hey user! Something **awesome** happened!



`<alert-banner>`

alert-banner.html

```
<link rel="import" href="../../polymer/polymer.html">

<dom-module id="alert-banner">
  <template>
  </template>
  <script>
    Polymer({
      is: 'alert-banner'
    });
  </script>
</dom-module>
```

alert-banner.html

```
<link rel="import" href="../../polymer/polymer.html">
```

```
<dom-module id="alert-banner">
```

```
  <template>
```

```
</template>
```

```
<script>
```

```
  Polymer({
```

```
    is: 'alert-banner'
```

```
  });
```

```
</script>
```

```
</dom-module>
```



**Import all of your
*dependencies***

alert-banner.html

```
<link rel="import" href="../../polymer/polymer.html">
```

```
<dom-module id="alert-banner">
```

```
  <template>
```

```
  </template>
```

```
  <script>
```

```
    Polymer({
```

```
      is: 'alert-banner'
```

```
    });
```

```
  </script>
```

```
</dom-module>
```



A container for your
element definition

alert-banner.html

```
<link rel="import" href="../../polymer/polymer.html">
```

```
<dom-module id="alert-banner">
```

```
  <template>
```

```
  </template>
```

```
  <script>
```

```
    Polymer({
```

```
      is: 'alert-banner'
```

```
    });
```

```
  </script>
```

```
</dom-module>
```



Local DOM is the DOM
an element is *in charge of*
creating and managing

Shadow DOM

Shadow DOM || “Shady DOM”

Shadow DOM || “Shady DOM” == **Local DOM**

alert-banner.html

```
<link rel="import" href="../../polymer/polymer.html">
```

```
<dom-module id="alert-banner">
```

```
  <template>
```

```
  </template>
```

```
  <script>
```

```
    Polymer({
```

```
      is: 'alert-banner'
```

```
    });
```

```
  </script>
```

```
</dom-module>
```



Local DOM is the DOM
an element is *in charge of*
creating and managing

alert-banner.html

```
<link rel="import" href="../../polymer/polymer.html">

<dom-module id="alert-banner">
  <template>
    <style>
      .alert { background: blue; color: white; }
    </style>
    <div class="alert">
      Hey user! Something awesome happened!
    </div>
  </template>
  <script>
    Polymer({
      is: 'alert-banner'
    });
  </script>
</dom-module>
```



Hey user! Something **awesome** happened!

alert-banner.html

```
<link rel="import" href="../../polymer/polymer.html">

<dom-module id="alert-banner">
  <template>
    <style>
      .alert { background: blue; color: white; }
    </style>
    <div class="alert">
      Hey user! Something awesome happened!
    </div>
  </template>
  <script>
    Polymer({
      is: 'alert-banner'
    });
  </script>
</dom-module>
```



Define your
prototype

</header>

</nav>

<main>

<h1 class="logo">Polymer!</h1>

<alert-banner></alert-banner>

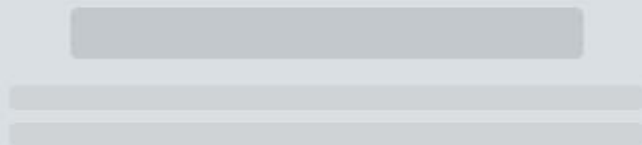
<section>

<article class="top-story">



http://www.webaddress.com

Hey user! Something **awesome** happened!



alert-banner.html

```
<link rel="import" href="../../polymer/polymer.html">

<dom-module id="alert-banner">
  <template>
    <style>
      .alert { background: blue; color: white; }
    </style>
    <div class="alert">
      Hey user! Something awesome happened!
    </div>
  </template>
  <script>
    Polymer({
      is: 'alert-banner'
    });
  </script>
</dom-module>
```

Replace hard-coded data



alert-banner.html

```
<link rel="import" href="../../polymer/polymer.html">

<dom-module id="alert-banner">
  <template>
    <style>
      .alert { background: blue; color: white; }
    </style>
    <div class="alert">
      <content select=".message"></content>
    </div>
  </template>
  <script>
    Polymer({
      is: 'alert-banner'
    });
  </script>
</dom-module>
```



With content elements!

Light DOM - The world outside
your component's **Local DOM**

alert-banner.html

```
<link rel="import" href="../../polymer/polymer.html">
```

```
<dom-module id="alert-banner">
```

```
  <template>
```

```
    <style>
```

```
    .alert { background: blue; color: white; }
```

```
    </style>
```

```
    <div class="alert">
```

```
      <content select=".message"></content>
```

```
    </div>
```

```
  </template>
```

```
<script>
```

```
  Polymer({
```

```
    is: 'alert-banner'
```

```
  });
```

```
</script>
```

```
</dom-module>
```



Select content with
CSS selectors


```
</header>
```

```
</nav>
```

```
<main>
```

```
<h1 class="logo">Polymer!</h1>
```

```
<alert-banner></alert-banner>
```

```
<section>
```

```
<article class="top-story">
```

```

```

```
<p>Lorem ipsum dolor sit amet...</p>
```

```
</article>
```

```
</header>
```

```
</nav>
```

```
<main>
```

```
<h1 class="logo">Polymer!</h1>
```

```
<alert-banner>
```

```
  <span class="message">
```

Success! Your first component!

```
  </span>
```

```
</alert-banner>
```

```
<section>
```

Matching class



```
<span class="message">
```

Success! Your first component!



Home Page

http://www.webaddress.com

Success! Your first component!



Elements

Building blocks for a better web

“There’s an element for that!”

*[https://beta.webcomponents.org
/collection/Polymer/elements](https://beta.webcomponents.org/collection/Polymer/elements)*

Applications

Combining elements into something great

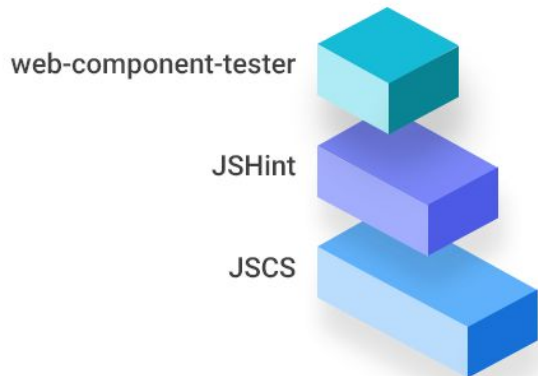
Create or reuse elements in any app

Production-ising Apps

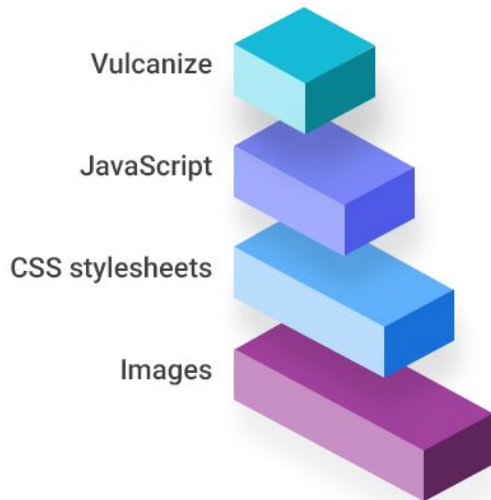
Build process out of the box



QUALITY & TESTING



MINIFICATION



OFFLINE



CROSS-DEVICE RELOAD



Let's build some apps with Polymer!



bit.ly/polycasts

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 9 min

Google Analytics for iOS Apps

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polymer-project.org



Muchas gracias

¿Preguntas?



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