



DevFest Toulouse 2017

Mixité dans le monde des
Web Components

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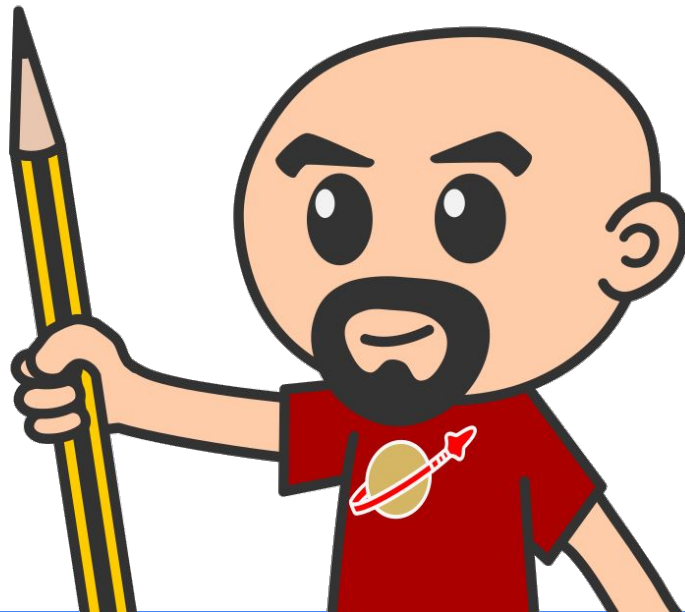
Horacio Gonzalez

@LostInBrittany

Cityzen Data

<http://cityzendata.com>

Spaniard lost in Brittany,
developer, dreamer and
all-around geek



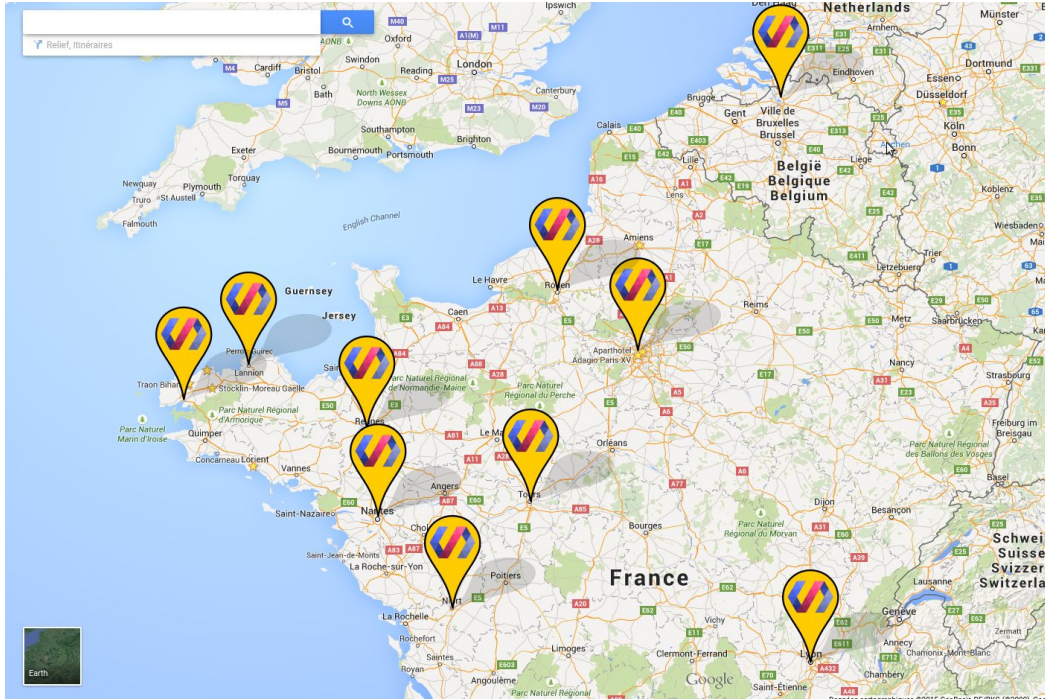
Cyril Balit



 @cbalit

Everything begins with a conversation

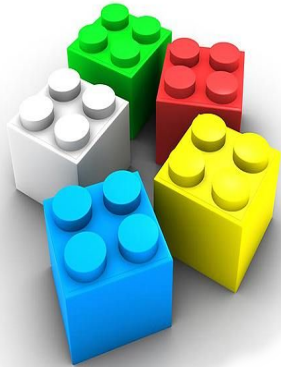
Both of us have spoken quite a lot about Polymer...



We have told everybody about the upcoming revolution of the Web Components



About app built brick by brick



So we met often,
and we decided to do a talk together



But about what?
Polymer?



We have introduced Polymer,
explained the Polymer API,
done Polymer hands-on labs,
taught Polymer...

So this time...

This time needed to be different

The 3 minutes context

Web Components



HTML
IMPORTS



SHADOW
DOM



TEMPLATES



CUSTOM
ELEMENTS

Custom Element



To define your own HTML tag

```
<body>
  ...
  <script>
    window.customElements.define('my-element',
      class extends HTMLElement {...});
  </script>
  <my-element></my-element>
</body>
```

Shadow DOM



To encapsulate subtree and style in an element

```
<button>Hello, world!</button>
<script>
var host = document.querySelector('button');
const shadowRoot = host.attachShadow({mode: 'open'});
shadowRoot.textContent = 'こんにちは、影の世界!';
</script>
```

Hello, world!



こんにちは、影の世界!

HTML Imports



To include an html page in another one

```
<link rel="import" href="warnings.html">
<script>
  var link = document.querySelector('link[rel="import"]');
  var content = link.import;
  // Grab DOM from warning.html's document.
  var el = content.querySelector('.warning');
  document.body.appendChild(el.cloneNode(true));
</script>
```






























Template



To have clonable document template






























```
<template id="mytemplate">  
  <img src="" alt="great image">  
  <div class="comment"></div>  
</template>
```

```
var t = document.querySelector('#mytemplate');  
// Populate the src at runtime.  
t.content.querySelector('img').src = 'logo.png';  
var clone = document.importNode(t.content, true);  
document.body.appendChild(clone);
```


| Browser support |  CHROME |  OPERA |  SAFARI |  FIREFOX |  EDGE |
|---|--|--|--|--|---|
|  TEMPLATES |  STABLE |  STABLE |  STABLE |  STABLE |  STABLE |
|  CUSTOM ELEMENTS |  STABLE |  STABLE |  STABLE |  DEVELOPING |  CONSIDERING |
|  SHADOW DOM |  STABLE |  STABLE |  STABLE |  DEVELOPING |  CONSIDERING |
|  IMPORTS |  STABLE |  STABLE |  ON HOLD |  ON HOLD |  CONSIDERING |

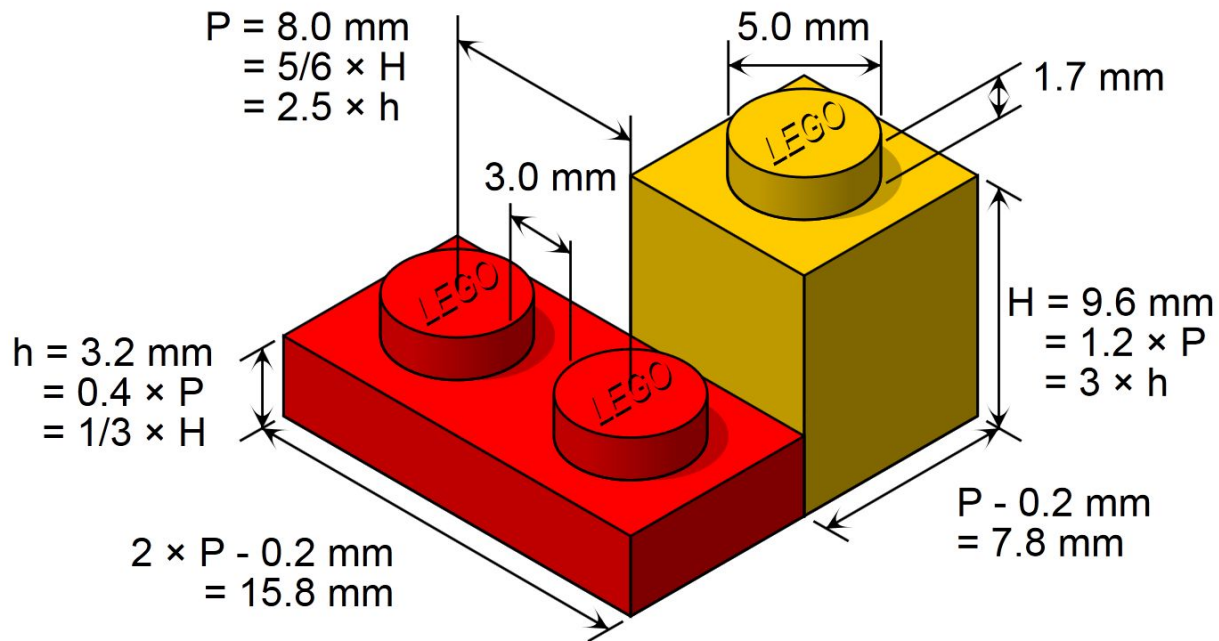


Polyfills...

| Browser support |  CHROME |  OPERA |  SAFARI |  FIREFOX |  EDGE |
|---|--|--|---|--|--|
|  TEMPLATES |  STABLE |  STABLE |  STABLE |  STABLE |  STABLE |
|  CUSTOM ELEMENTS |  STABLE |  STABLE |  STABLE |  POLYFILL |  POLYFILL |
|  SHADOW DOM |  STABLE |  STABLE |  STABLE |  POLYFILL |  POLYFILL |
|  IMPORTS |  STABLE |  STABLE |  POLYFILL |  POLYFILL |  POLYFILL |

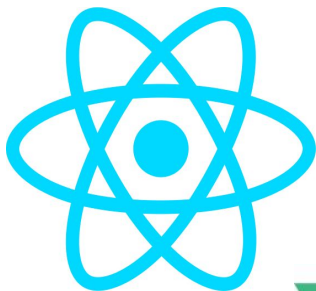
But in fact, it's just an element...

- Attributes
- Properties
- Methods
- Events



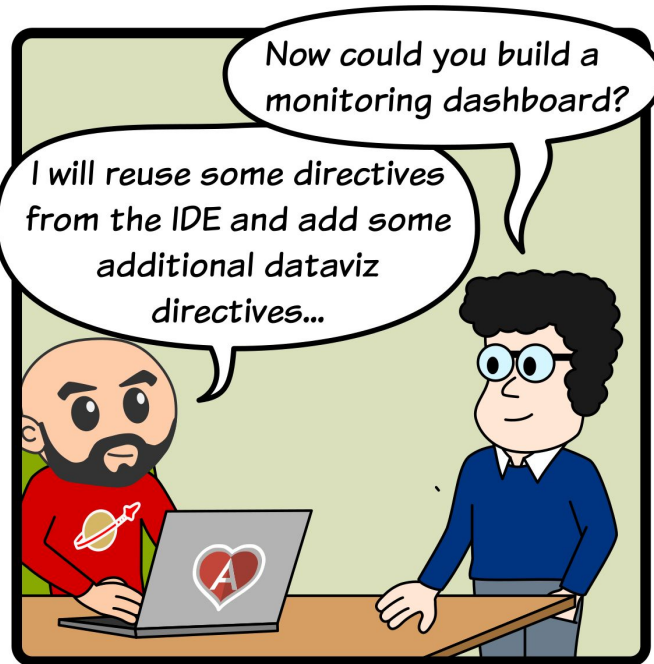
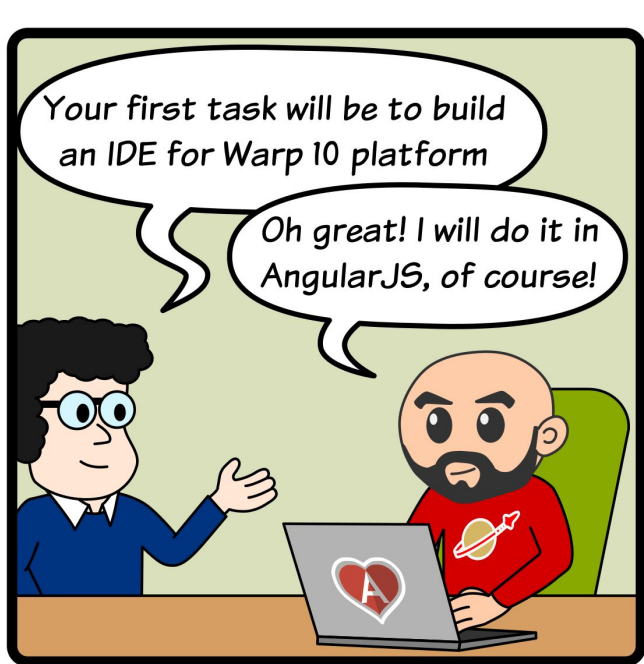
But even more important...
Why?

Frameworks are born, evolve, are forked, die...

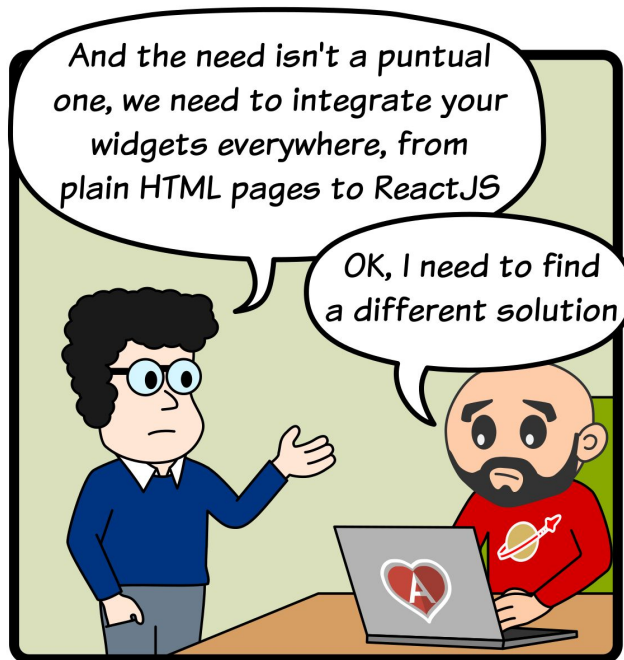
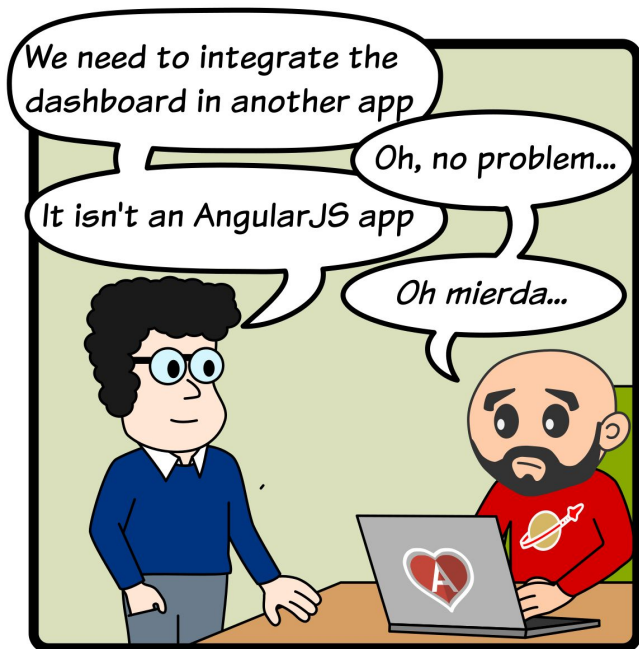


And everybody has their favorite one...

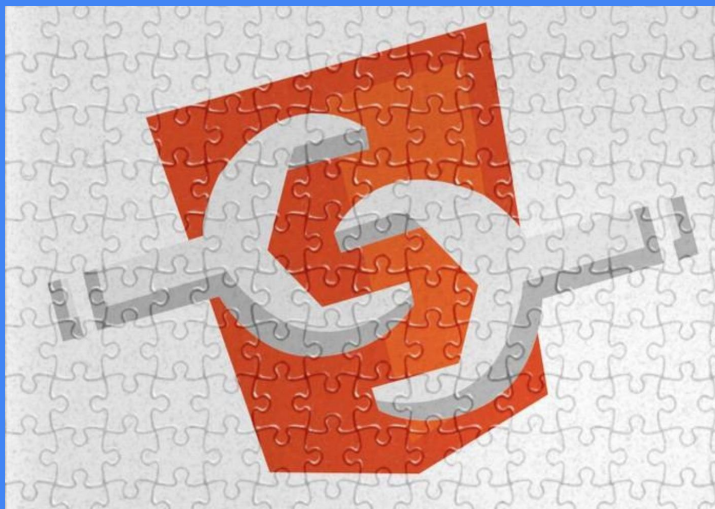
I learnt it the hard way, as an angular fanboy...



When I hit a wall...



And then I understood...



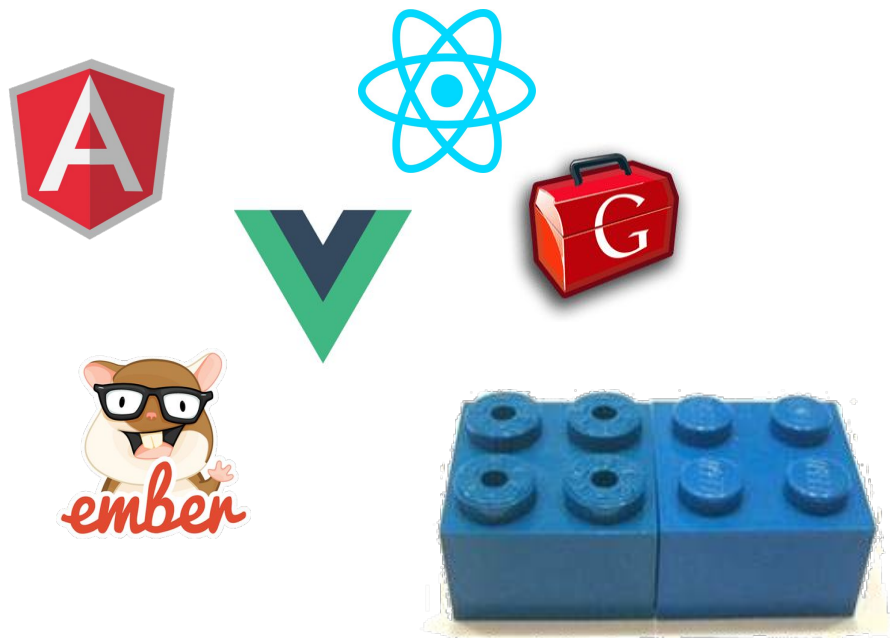
Encapsulated, reusable and composable widgets for the **Web Platform**



Too pretty to be true?

Variations of the same questions

*But does it really works with
<inser techno here/>?*



*And what about the other
web components technologies?*



Objectifs



Using web components from different libraries in several webapp frameworks

Demo time!

Some after thoughts...

All the good things ends...

After Nantes, Grenoble, Paris and now Toulouse,

it's the last time we do this talk...



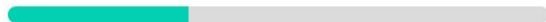
Because it is not needed anymore!

Custom Elements Everywhere

Making sure frameworks and custom elements can be BFFs 

AngularJS (1.x)

SCORE
10/30



Handling data

AngularJS cannot bind to a custom element's attributes or properties without custom directives.

Helper libraries are available to manage these directives, such as [angular-custom-elements](#).

Handling events

AngularJS can listen to native DOM events imperatively, by selecting the element and adding an `.on()` event handler. Declarative event handling is not supported.

Libraries such as [angular-custom-elements](#) can set event listeners declarative, based on particular event naming conventions.

[View the tests](#)

Related Issues

Support the `[property]` / `bind-property` syntax in AngularJS

#12198 opened Jun 23, 2015 by mhevery

Support the `(event)` / `on-event` syntax in AngularJS

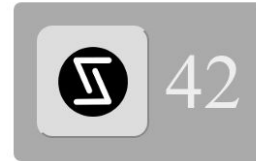
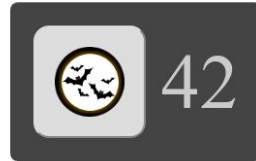
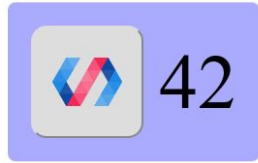
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But they are lots of web component libraries!



Do all of them work with the frameworks
as well as Polymer or Vanilla elements?

Well, in fact the DO



Shared value: 42

They are all standards compliant custom elements!

You can mix and match at will

We want the code!

LostInBrittany / web-components-in-frameworks

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|------------|--------------------------------------|---------------|
| angular1 | Updating to Polymer 2 | 2 days ago |
| angular2 | improve style for not chrome browser | 10 days ago |
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| polymer | Polymer 2 | a day ago |
| react | improve style for not chrome browser | 10 days ago |
| server | Server local images | 11 months ago |
| vuejs | Updating Web Components for Vue | a day ago |
| .gitignore | update ignore | 14 days ago |
| README.md | Initial commit | a year ago |

And you can get it:

<https://github.com/LostInBrittany/web-components-in-frameworks>

<https://github.com/LostInBrittany/a-world-outside-polymer>