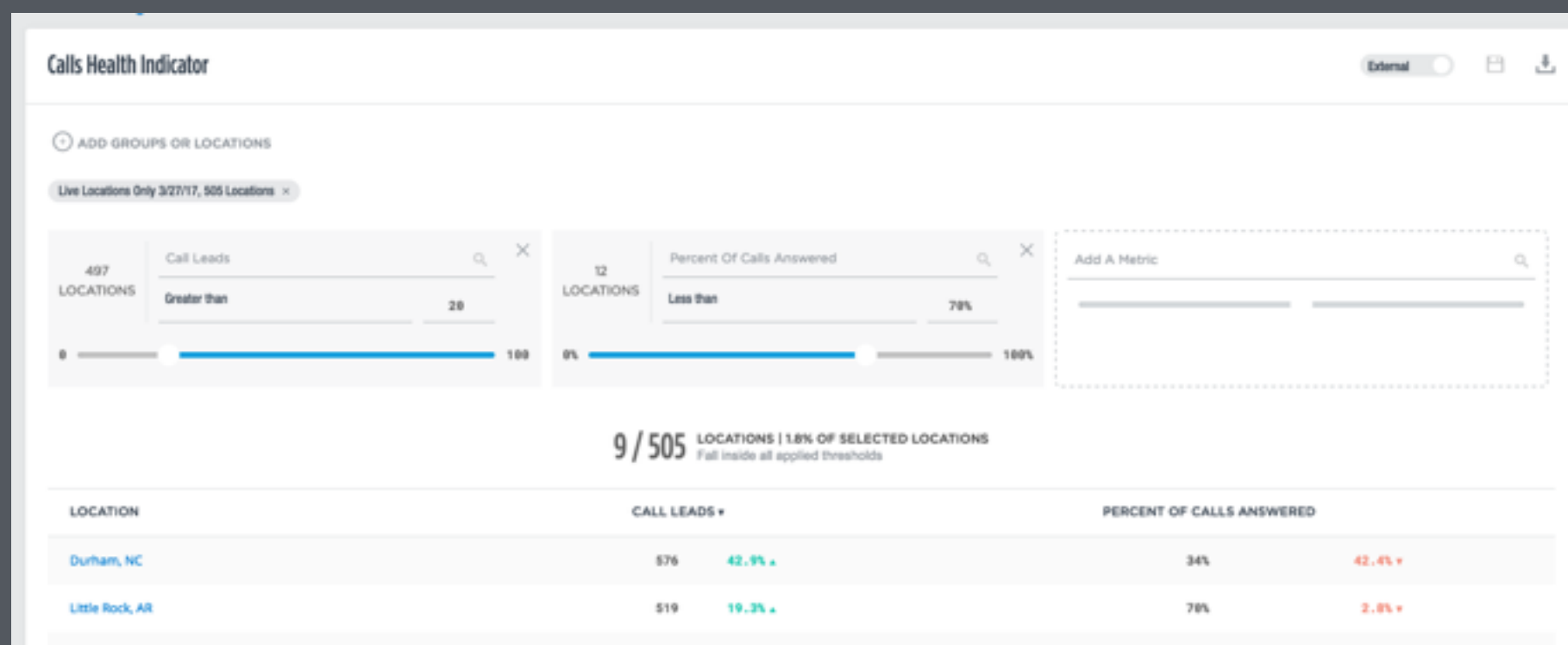
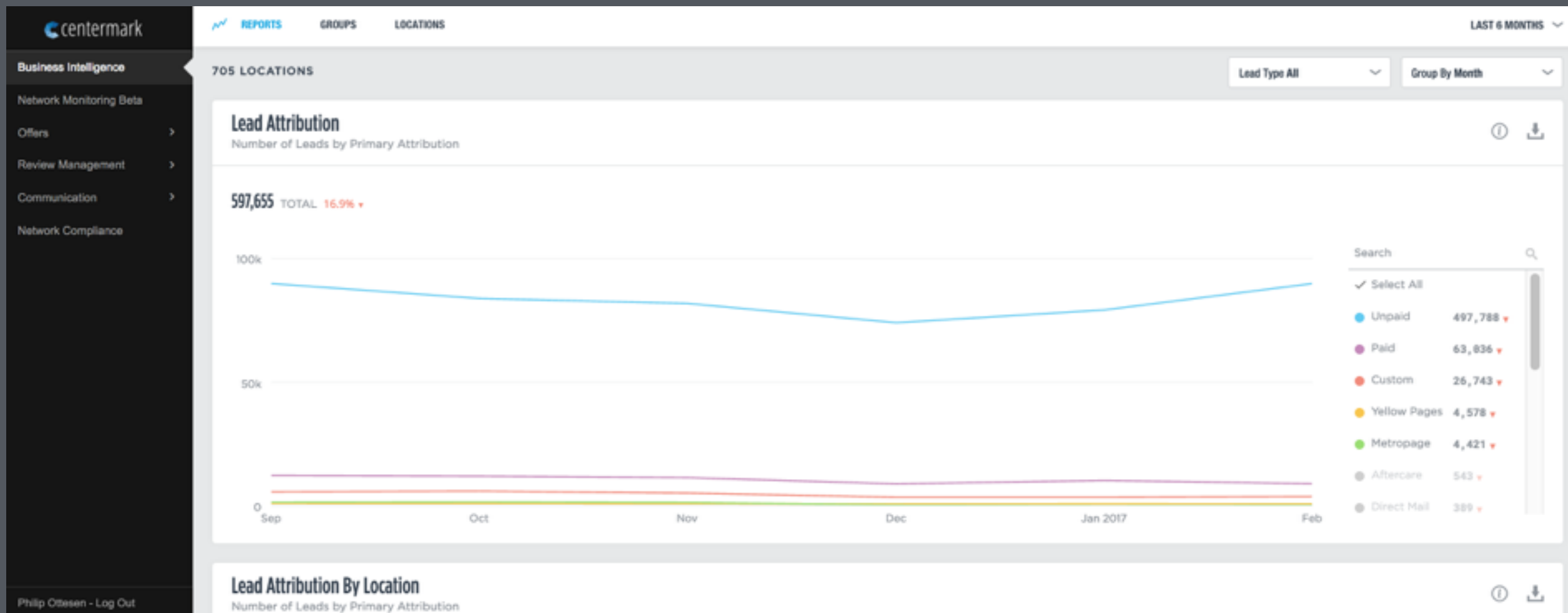




React



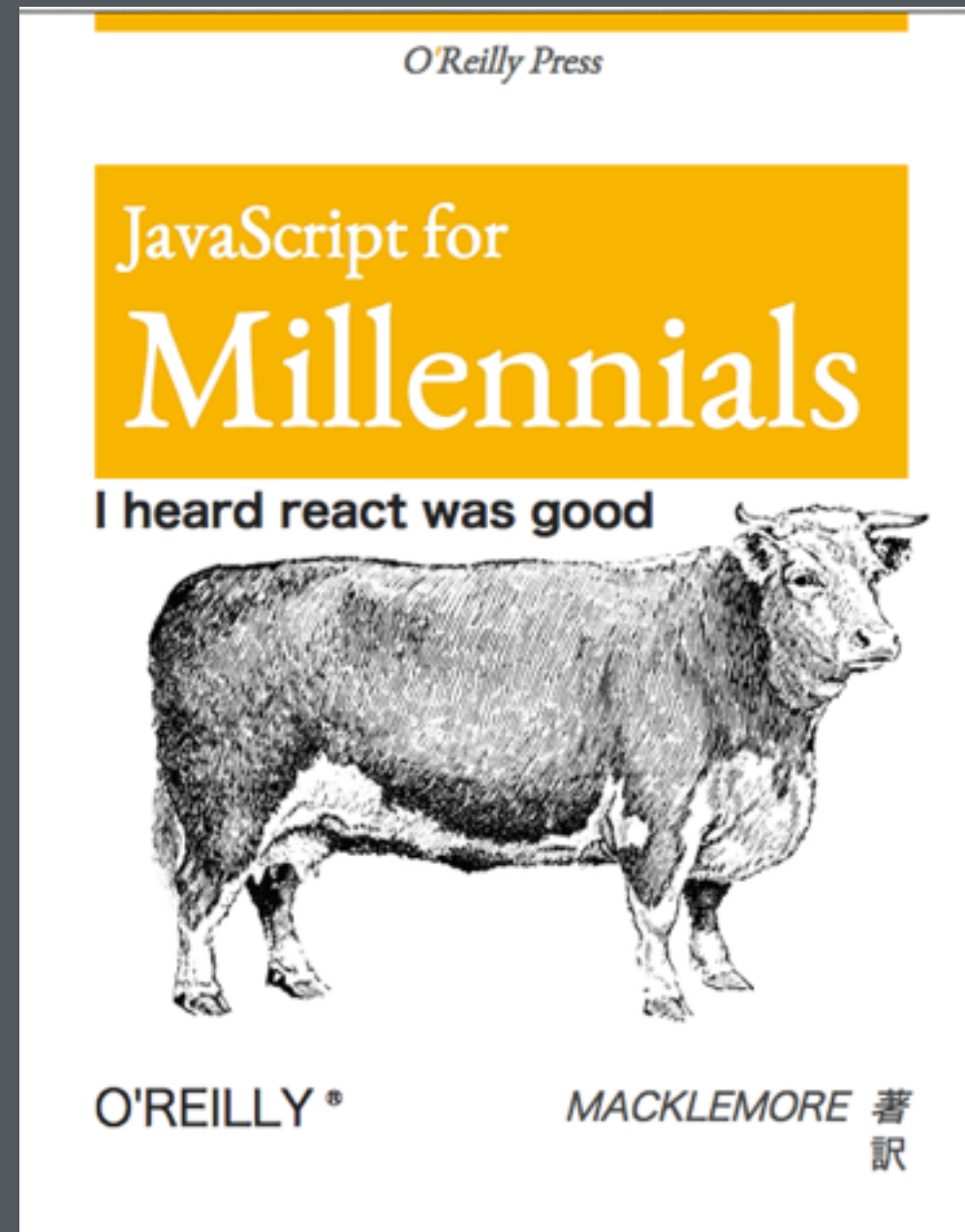
clone



Agenda

- Introduction to React.js, examples
- Tooling
- Twitch clone

“Declarative, component-based API for building user interfaces” ???



Imperative

```
function double (arr) {  
  var results = [];  
  for (var i = 0; i < arr.length; i++) {  
    results.push(arr[i] * 2)  
  }  
  return results  
}
```

How

Declarative

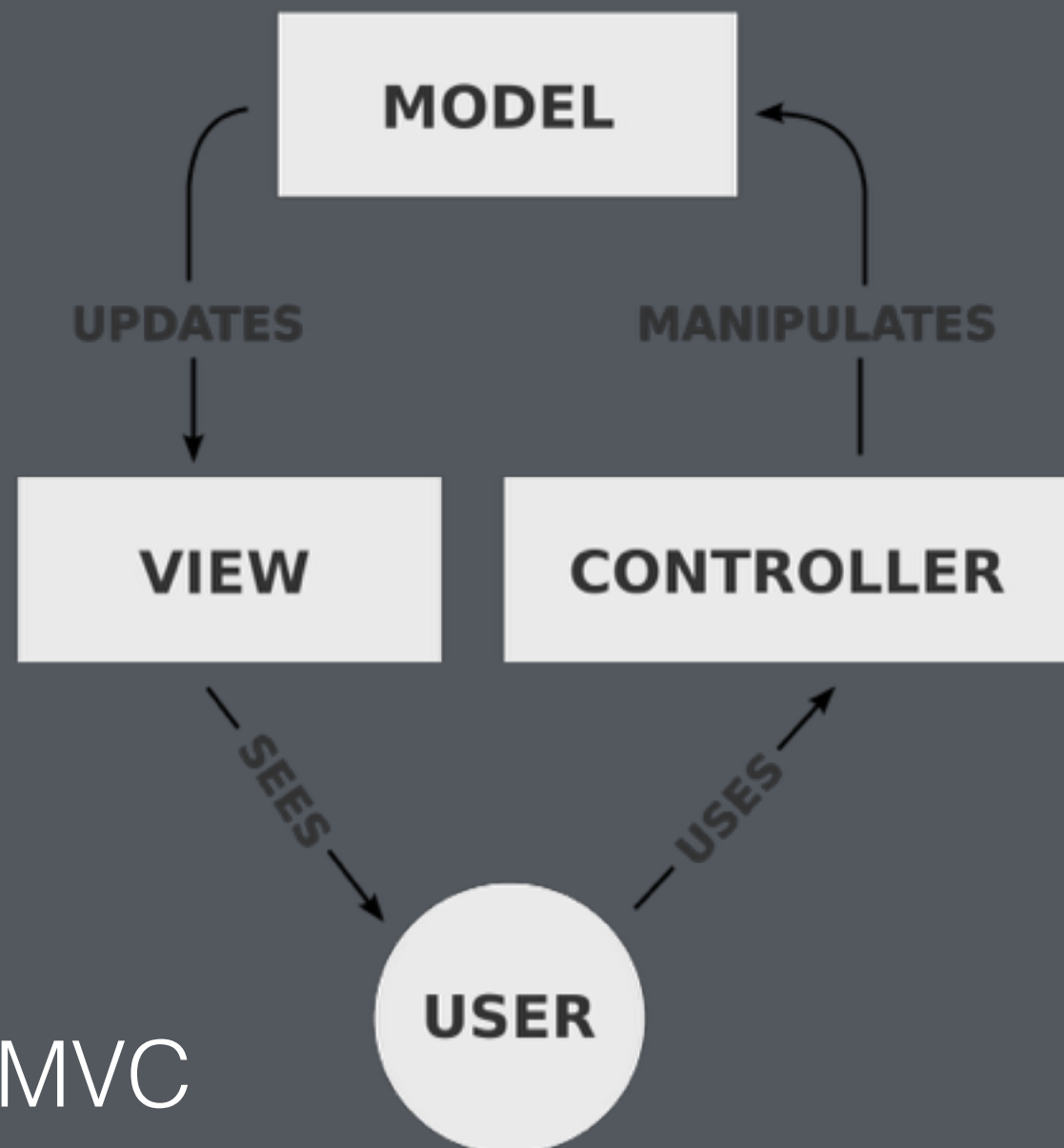
```
function double (arr) {  
  return arr.map(function(item) {  
    return item * 2;  
  });  
}
```

What

Abstracting away implementation

Why is React different?

Traditional JS frameworks

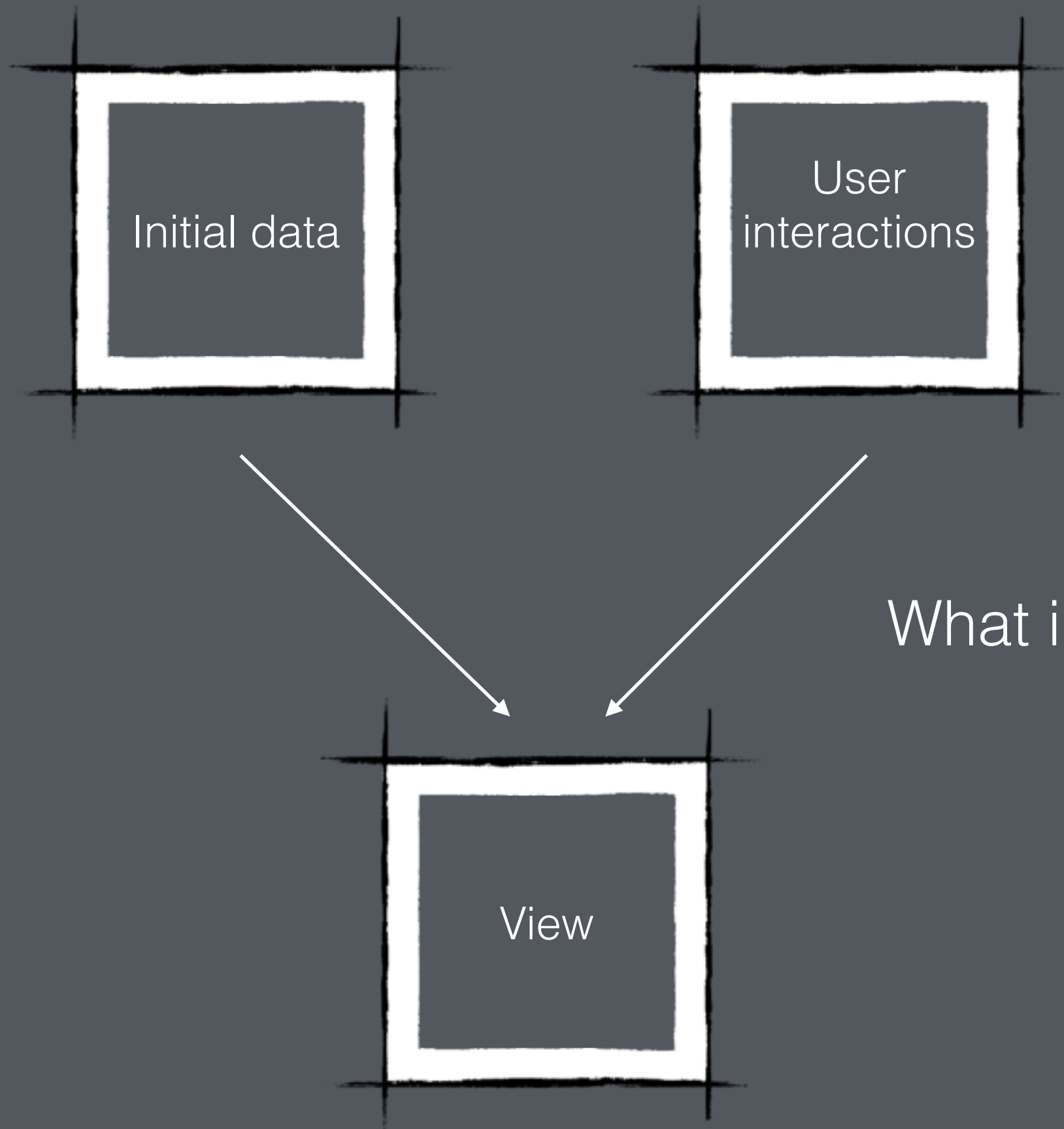


What is the state of my UI?

What happens on an update?

MVC

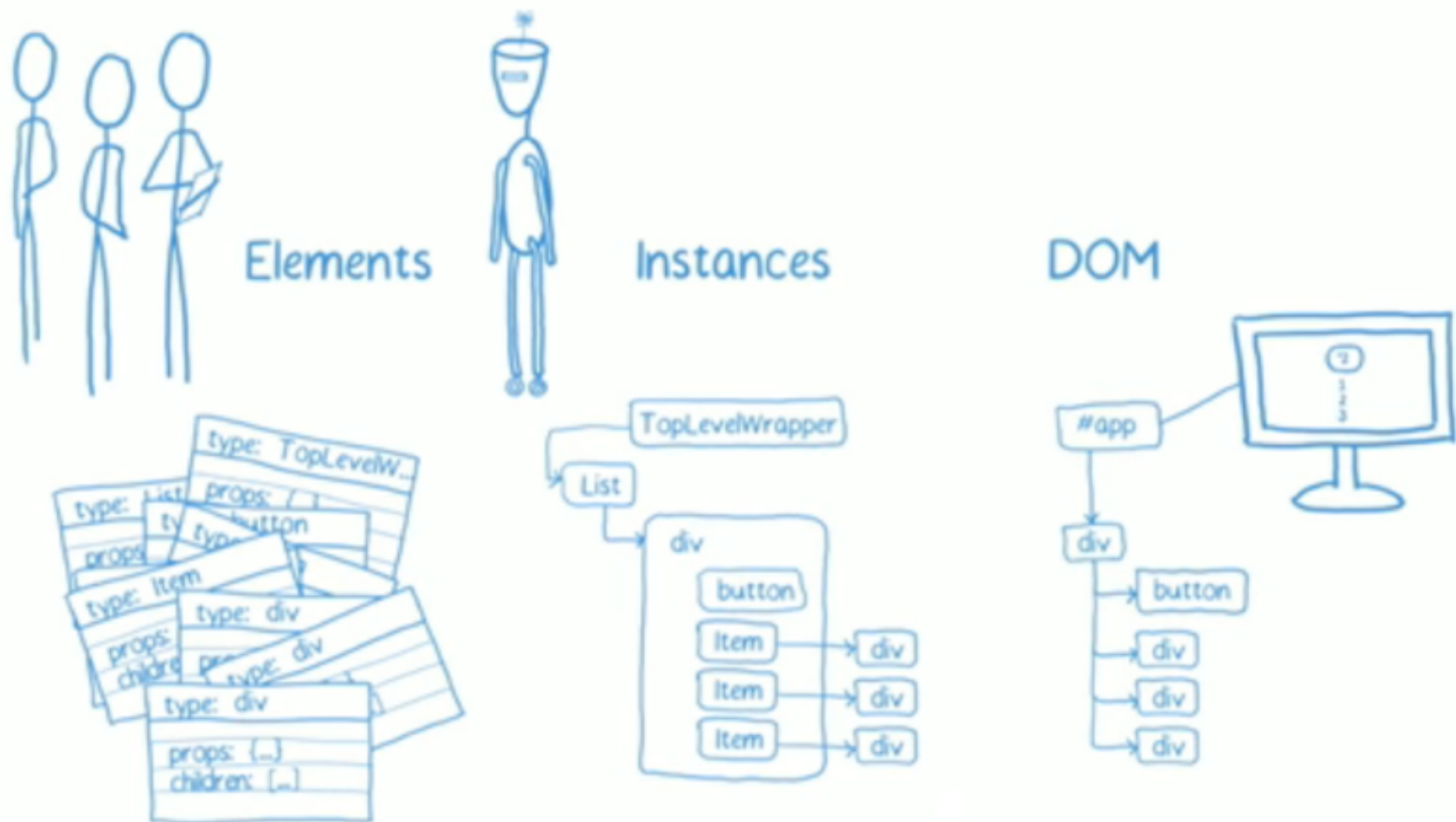
$F(\text{data}) \Rightarrow \text{view}$



What is the state of my UI?

Updates?

```
render: function() { ... }
```



es5

```
var Message = React.createClass({
  render: function render() {
    return React.DOM.div(
      { className: 'my-class', onClick: onClickHandler },
      [
        React.DOM.span(null, 'Hello'),
        React.DOM.h1(null, 'Tech@NYU')
      ]
    );
  }
});

ReactDOM.render(
  React.createElement(Message),
  document.getElementById('app')
);
```

es6 + JSX

```
class Message extends React.Component {  
  render() {  
    return (  
      <div className='my-class' onClick={onClickHandler}>  
        <span>Hello</span>  
        <h1>Tech@NYU</h1>  
      </div>  
    );  
  }  
}  
  
ReactDOM.render(  
  <Message />,  
  document.getElementById('app')  
);
```

Lifecycle of a React component

```
class Message extends React.Component {  
  render() {  
    return <div> ... </div>  
  }  
  
  //componentWillMount, componentDidMount  
  //shouldComponentUpdate, ...  
}
```

Props

Arguments from parent components

Immutable

```
class Message extends React.Component {  
  render() {  
    return (  
      <div>  
        {this.props.msg}  
      </div>  
    );  
  }  
}
```

...

```
<Message msg={'Hello'}>
```

State

Isolated to the component

Mutable

Triggers a new render when updated

<https://codepen.io/anon/pen/xqJNKm>

Tooling

BABEL



create-react-app

Typescript



```
const a: number = 1;
const b: string = '1';
const c: string = a + b;
```

```
let someFunction: (someArg: string) => number;
someFunction = (a) => parseInt(a);
```

```
type Tweet = {
  id: string;
  text: {
    shortText: string;
    body: string;
    mentions: string[];
  }
}
```

```
const tweet: Tweet = {
  id: 'axY123',
  text: {
    shortText: 'Hi',
    body: "Hi @TechatNYU I'm a tweet",
    mentions: []
  }
}
```

```
var a = 1;
var b = '1';
var c = a + b;
var someFunction;
someFunction = function (a) {
  return parseInt(a);
};
var tweet = {
  id: 'axY123',
  text: {
    shortText: 'Hi',
    body: "Hi @TechatNYU I'm a tweet",
    mentions: []
  }
};
```

Compiler that can emit browser-compatible code while type-checking

twitch

twitch

twitch

twitch

twitch

twitch

twitch

The Legend of Zelda: Breath of the Wild

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Live Channels Videos

Language



The Legend of Zelda: Breath of the W..
1,049 viewers on ExcessiveProfanity



Breath of the Wild - All Main Quests ...
370 viewers on GoronGuy



【栗館】 3/28 《薩爾達傳說：荒野之...
241 viewers on 栗館 (kurikan)



Zelda - Analytical Run (6)
212 viewers on epicnamebro



Zelda: Breath of the Wild (Switch) im...
199 viewers on HirnsturzZockt



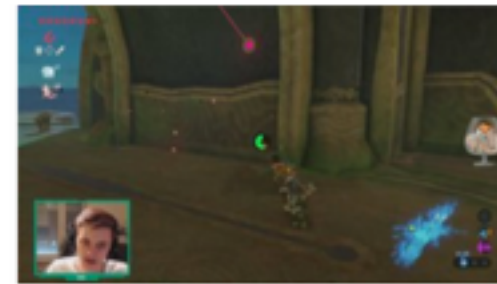
All Dungeons SpeedRuns! Pb 2:36:2...



Breath of the Wild Day 1 @Venis_Ga...



【康妮】 @羅康妮 爆發家五郎@【薩...



Watch me struggle solving puzzles d...



THIS IS A ZELDA STREAM | !FreeSu...

Thanks for listening!

Questions?

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<https://github.com/pjo256>