
Adieu RxJS ! Vive les Signals ! Oh wait...
Anthony Pena

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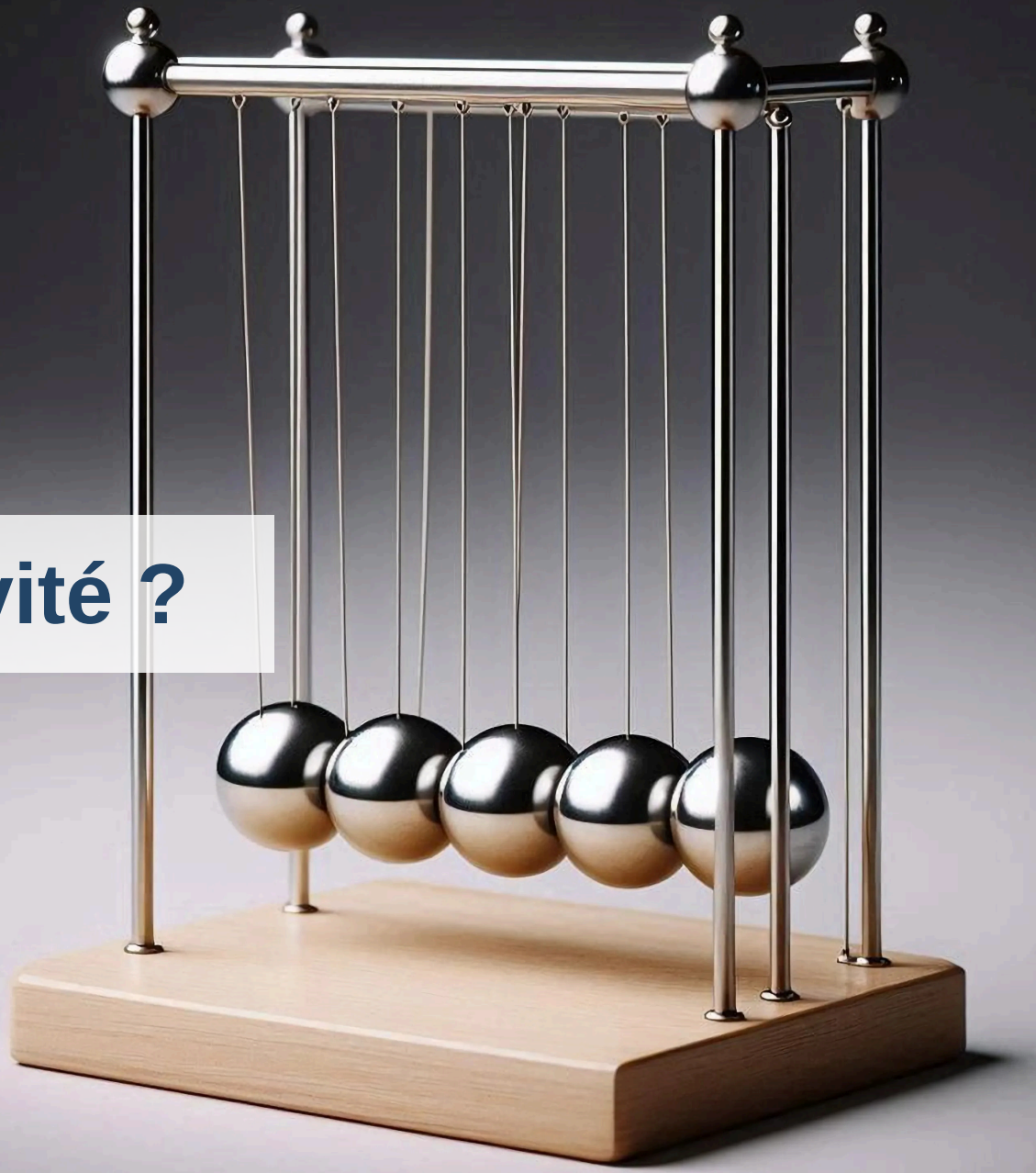
Women only Workshops


Avant les frameworks

La Réactivité ?



> "A declarative programming model for updating based on changes to state."
> Kristen / pzuraq

https://www.pzuraq.com/blog/what-is-reactivity

Angular.JS et ses watchers

Angular 2 et Zone.js

```
@Component({
  template: `
    <p>{{ text }}</p>
  `,
})
export class PlaygroundComponent {
  text = "";

  ngOnInit() {
      setInterval(() => this.text += '!', 1_000)
  }
}
```

```
@Component({
  template: `
    <input (change)="setText($event)"/>
    <p>{{ text }}</p>
  `,
})
export class PlaygroundComponent {
  text = "";

  setText(event: Event) {
    this.text = (event.target as HTMLInputElement).value;
  }
}
```

```
@Component({
  template: `
    <input [(ngModel)]="text"/>
    <p>{{ text }}</p>
  `,
})
export class PlaygroundComponent {
  text = "";

  ngOnInit() {
      setInterval(() => this.text += '!', 1_000)
  }
}
```

```
@Component({
  selector: 'app-root',
  standalone: true,
  template: `
    <p>{{ text }}</p>
  `,
})
export class PlaygroundComponent {
  text = "waiting...";

  ngOnInit() {
      this.asyncHello().then(text => this.text = text);
  }

  private asyncHello(): Promise<string> {
    // ...
  }
}
```

```
@Component({
  template: `
    <p>{{ text | async }}</p>
  `,
})
export class PlaygroundComponent {
  text = this.asyncHello();

  private asyncHello(): Promise<string> {
    // ...
  }
}
```

```
@Component({
  template: `
    <app-alert>Alert</app-alert>
    <p>{{ text | async }}</p>
    <app-card />
    <app-card />
  `,
})
export class PlaygroundComponent {
  @Input() text: string;
}
```

```
@Component({
  template: `
    <app-alert>Alert</app-alert>
    <p>{{ text | async }}</p>
    <app-card />
    <app-card />
  `,
})
export class PlaygroundComponent {
  @Input() text: string;
  @Ouput() textChange = new EventEmitter<string>();
}
```

```
@Component({
  template: `
    <app-alert>Alert</app-alert>
    <p>{{ text | async }}</p>
    <app-card />
    <app-card />
  `,
})
export class PlaygroundComponent {
  @Input() text: string;
  @Ouput() textChange = new EventEmitter<string>();
  @ViewChild(Alert) cards: Alert;
}
```

```
@Component({
  template: `
    <app-alert>Alert</app-alert>
    <p>{{ text | async }}</p>
    <app-card />
    <app-card />
  `,
})
export class PlaygroundComponent {
  @Input() text: string;
  @Ouput() textChange = new EventEmitter<string>();
  @ViewChild(Alert) cards: Alert;
  @ViewChildren(CustomCard) cards: QueryList<CustomCard>;
}
```

C'est cool tout ça non ?

Oui mais Zone.js

Angular 17 et les Signals

CODE SLIDE : reprendre la demo edition de variable mais en Signal

CODE SLIDE : reprendre la demo edition de champ de texte mais en Signal

CODE SLIDE : reprendre la demo promesse mais en Signal

CODE SLIDE : montrer effect

CODE SLIDE : montrer computed

Signals <3

tc39 / **proposal-signals**

Type / to search

Code | Issues 101 | Pull requests 11 | Actions | Security | Insights

proposal-signals

Public

generated from tc39/template-for-proposals

Unwatch 97 | Fork 54 | Starred 3k

main | 8 Branches | 0 Tags | Go to file t | Add file | Code

littledan Simpler logo (#229) b608efa · 4 days ago 146 Commits

README | Code of conduct | MIT license | Security

About

A proposal to add signals to JavaScript.

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54 forks
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Contributors 20

JavaScript Signals standard proposal

Stage 1 (explanation)

TC39 proposal champions: Daniel Ehrenberg, Yehuda Katz, Jatin Ramanathan, Shay Lewis, Kristen Hewell Garrett, Dominic Gannaway, Preston Sego, Milo M, Rob Eisenberg

Original authors: Rob Eisenberg and Daniel Ehrenberg

Bientôt un standard

This document explains the benefits of signals for JavaScript, similar to the Promises/A+ effort which preceded the Promises standardized by TC39 in ES2015. Try it for yourself, using a polyfill.

Similarly to Promises/A+, this effort focuses on aligning the JavaScript ecosystem. If this alignment is successful, then a standard could emerge, based on that experience. Several framework authors are collaborating here on a

https://github.com/tc39/proposal-signals

Zone.js c'est fini ?

CODE SLIDE : demo Signal input()

CODE SLIDE : demo Signal output()

CODE SLIDE : demo Signal viewchild()

Oups j'ai oublié RxJS dans tous ça 🙊 (non)

Mais au fait... C'est quoi RxJS ?

RxJS

ReactiveX for JavaScript


ReactiveX
An API for asynchronous programming
with observable streams

Parlons Observable

CODE SLIDE : demo Signal + Observable toSignal() toObservable()

Observables

Composable functions with guarantees.

Use observables for cancellation and event coordination.

- **Generally stateless**
  process event and clean up
- **Multiple values**
  a collection of events or values over time
- **Push N values**
- **Convert to Signal? Yes**

https://twitter.com/BenLesh/status/1775207971410039230

Signals

A dependency graph of values and logic around notification, invalidation, computation, and memoization.

Use signals for state management.

- **Maintain state**
  retain things in memory
- **Single value**
  a value that changes over time
- **Read 1 value**
- **Convert to Observable? Avoidable**
  the event that set the signal can also notify the observabl

Mais du coup les Signals...

Quelques cas concrets

HttpClient et interceptors

// TODO slide code avec HttpClient

// TODO slide code avec interceptor

HttpClient et interceptors

// TODO logo RxJS

État interne des composants

Reactive Forms

Services

Global state management (NgRx, NgXs)

The NgXs way

The NgXs way

// TODO ajouter un bout de code montrant le mapping Signal

The NgRx way

The NgRx way

// TODO ajouter un bout de code montrant la creation d'un Signal Store

The NgRx way

// TODO ajouter un bout de code montrant le mapping Signal dans un composant

The NgRx way

// TODO ajouter un bout de code montrant l'utilisation d'RxJS dans le store

En résumé

Les Signals c'est pour gérer les états et la réactivité dans les composants

RxJS est là pour gérer tous vos flux de données

https://x.com/BenLesh/status/1775207971410039230

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https://k49.fr.nf

https://github.com/kuroidoruido/talks

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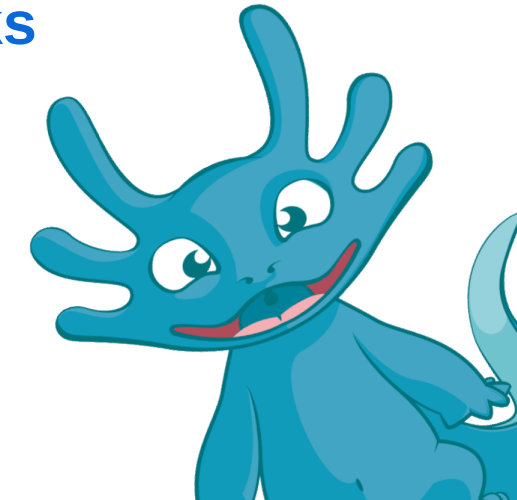

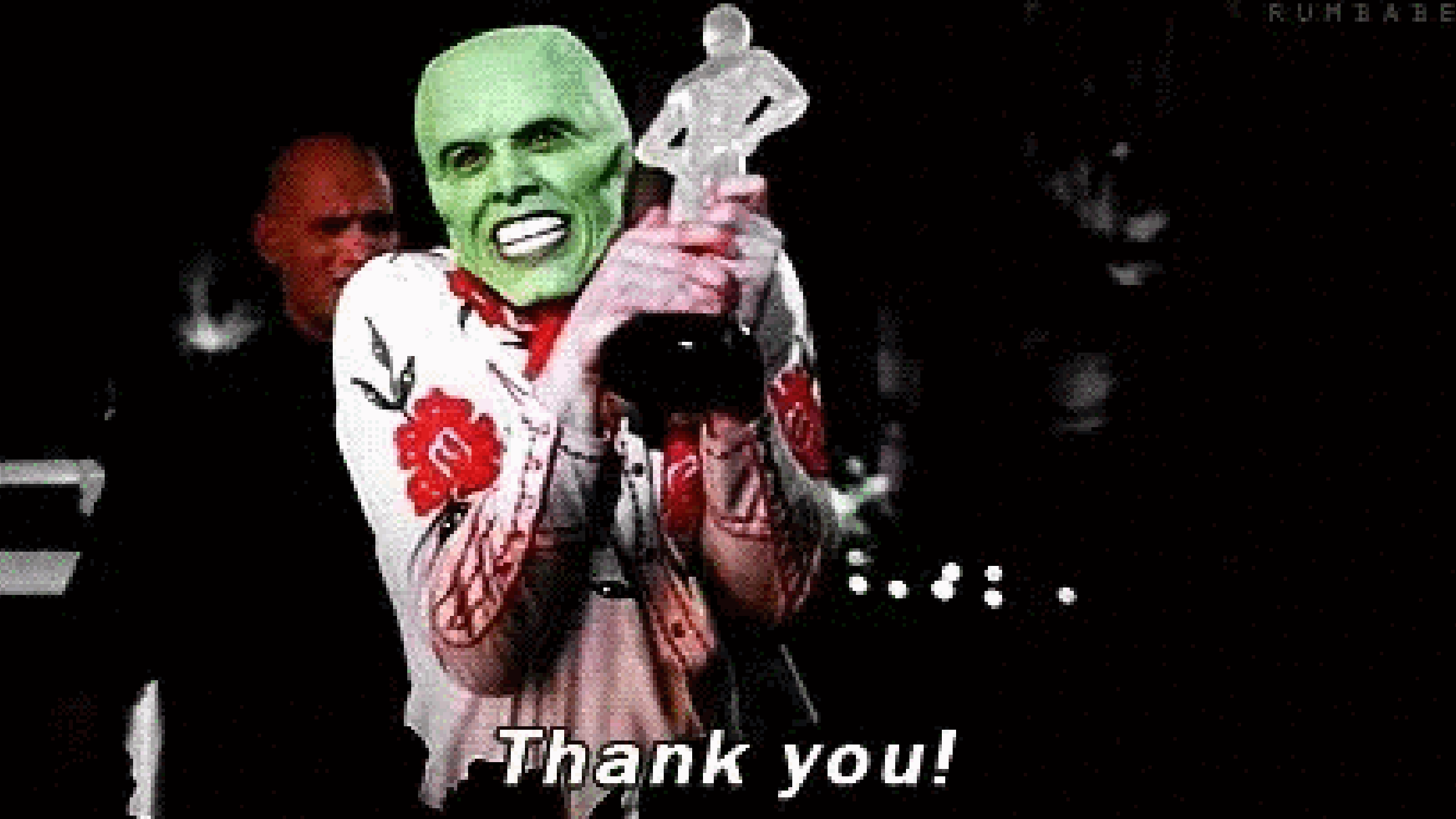
Thank you!